CHANGE SERVICE REQUESTED

April 20, 2007 Volume 29 Number 16 www.processor.com



How Prepared Are You For A Disaster?

Create A Plan Now To Prevent Scrambling In The Future

by Elizabeth Millard

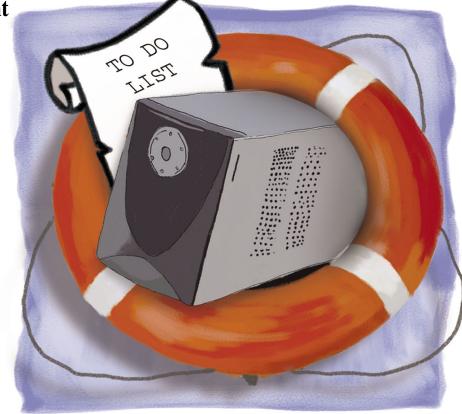
EVERYONE HOPES TO AVOID car accidents, illness, and home break-ins, but they're still aware that such incidents can happen, and most people load up on various forms of insurance to protect themselves just in case.

But when it comes to data centers, many IT managers don't think about the same kind of protection for their equipment and data. Insurance policies may be in place in case of fire or flood, but those only cover the cost of replacing the machines; if there are no procedures for recovering data or getting employees back online quickly, the costs can be considerable.

Here are some steps for creating a surefire disaster recovery plan that can keep a data center safe—or at least significantly insured from major losses.

Have You Done A Reality Check?

Just after Sept. 11, 2001, some companies began thinking about what might happen in the event of other terrorist attacks, but enterprises need to expand their view of what constitutes disaster, says Paul Henry, technology evangelist at Secure Computing (www.Processor.com/SecureComputing).



"Disaster comes in many forms, from fires and tornadoes to data breaches to missing laptops," he notes. The data leak problem in particular should be part of every disaster plan, he advises. The loss of notebook computers with customer information, or a hack that captures financial information of clients, can be just as devastating as any hurricane.

"Very few organizations have plans that include how to deal with data loss," says Henry. "For small to midsized enterprises, I Go to Page 12

Changes Coming In Power Arena

Buying Clean Power Is Not As Easy As It Used To Be

by Curt Harler

WITHOUT CLEAN, reliable power, data centers can falter. There are new power standards that soon will be the norm. Every SME should plan for those upgrades.

"If I could give companies just one piece of advice, it would be to get on 208-volt power now," says Kevin Macomber, vice president for the Americas at Aphel Technologies (www.Processor.com/Aphel-Technologies).

Power plugs (the ones at the end of the cord) are also changing. SMEs need a plug that works with new, next-generation

equipment. The plugs on the newest Cisco servers are a good example. "Cisco requires a much different plug than the standard server," Macomber says.

A midsized company setting up a new system should anticipate the wiring evolving

from single-phase to 30-amp three-phase down the road.

Ken Brown, director of engineering for

Ken Brown, director of engineering for Leviton Power Solutions (www.Processor.com/Leviton), agrees with the recommendation to increase voltage to 208V. "The best strategy would be to ensure the facility has implemented good grounding and bonding and to install a coordinated surge protection system," Brown adds. "Build in a redundant power strategy and install an uninterruptible power supply generator for backup power."

There are simple ways to ensure your firm gets the best equipment possible, he continues. Review pertinent IEEE guides and recommended practices for power and grounding, Brown advises. Then, ensure that the products are UL (Underwriters Laboratories)-listed for safety.

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"If I could give companies one piece of advice, it would be to get on 208-volt power now."

- Aphel Technologies' Kevin Macomber

In This ISSUE

COVER FOCUS

Disaster Recovery/Preparedness

We talked with product manufacturers and other industry experts to come up with tips and advice to help your enterprise prepare for and recover from nearly any potential disaster.

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urchasing Equipment During A Disaster	11

TECH & TRENDS

The Right Data Center Power Options | 1

Without clean, reliable power, data centers can falter. There are new power standards that soon will be the norm. Every SME should plan for those upgrades.

Remote Office Data Protection | 25

Enterprises funnel loads of time, money, and energy into the process of protecting in-house data because the existing threats to data are numerous. Yet the moment an enterprise situates employees outside those walls, the rules of protection change.

Asset Recovery Services | 26

The acquisition of equipment is just the beginning of the asset life cycle, and organizations often lack the same processes and rigor when eliminating obsolete equipment as they exhibit when buying new.

Email Governance | 28

Email governance is the process of flagging noncompliant company emails, organizing email into categories, and archiving messages for longterm retrieval. Newer systems are componentbased or use a desktop agent to avoid the trap of re-archiving every email in a proprietary system.

Product Releases | 16

■ BMC Software released its BMC Service
Request Management software. ■ Citrix Systems
announced Citrix NetScaler 8.0 to provide application delivery software that can reach users on multiple devices or in any location. ■ CyberScrub
released CyberScrub Compliance Suite, which is
targeted at businesses that seek to comply with
federal and state laws and statutes. ■ HellermannTyton released the TT1220 thermal transfer
printer. ■ Idealstor announced Idealstor Teralyte,
a removable, disk-based backup system for SMEs.
■ Lieberman Software announced User Manager

Pro Suite, a security management suite. ■

Marathon released everRun, which prevents

Windows apps from shutting down during updates
and upgrades. ■ Nexsan teamed up with Reldata
on a new unified IP SAN/NAS storage system. ■

Opsware announced an updated version of its
Server Automation software. ■ SMC released its
new TigerStore SMB series NAS Storage Servers.

EACH WEEK

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For address change, fill out form below with new **Subscribe Today / Address Change Form** information and mail or fax. PLEASE PRINT Phone: (___ ___)_____ Fax: (_____) ____ All rights reserved. Contact Name: Company Name: __ Address: __ State: _____ Postal Code: _____ City: _ Email: ____ Web Address: ___ 3. What is your annual computer hardware/ 1. What is the size of your company (how many employees)? Less than 10 software purchasing budget? \$0 to \$9,999 \$10,000 to \$24,999 □ 200 to 499 □ \$100,000 to \$249,999 □ 500 to 999 □ 1,000+ □ 10 to 99 □ \$250,000 to \$499,999 \$25,000 to \$49,999 \$50,000 to \$99,999 □ 100 to 199 □ \$500,000 to \$999,000 □ \$1,000,000+ 2. How often do you purchase computer hardware/software?

☐ Weekly☐ Bi-weekly

☐ Monthly

□ Quarterly□ Annually

□ No Involvement

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EMAIL APPLIANCE April 20, 2007

Email Archiving

Records For Compliance, E-discovery & Knowledge Management

EMAIL ARCHIVING is now a business necessity as compliance programs such as Sarbanes-Oxley challenge publicly held firms to maintain archives of all their electronic communication. Other drivers for email archiving include knowledge management and e-forensics—maintaining access to email archives serves multiple business objectives.

QStar Technologies just launched the SntryML Email Archive Appliance to capture, index, and archive email messages from servers. The SntryML Email Archive Appliance allows users to search electronic records for compliance, e-discovery, and knowledge-sharing business needs. The appliance is integrated with QStar's HSM and QStar Data Director products to provide email archiving and managed data storage.

The SntryML Email Archive Appliance is based on the SntryStr Archive Appliance Platform and automatically captures 100% of all sent and received email. It supports the major email servers in use today even if your SME is a mixed technology environment. As an email archive appliance, it can help you reduce mailbox limits while providing users with virtually unlimited email storage. It can also help you with critical email server backups by creating a full copy of all messages automatically, meaning mail-server message store backups are no longer a requirement.

Email archives are kept in standard Internet transfer format RFC822, a vendor-independent file format with any email attachments archived with the corresponding email message. This vendor-neutral format is a flat-file, enabling you to capture archive content in back-office systems while still allowing users to search and index messages as needed through a self-service interface, freeing your IT staff from having to search the email archives and focus on more important tasks.

Performance of the SntryML Email Archive Appliance is capable of managing 250,000 messages per hour per SntryML you deploy in your enterprise, meaning the SntryML can more than accommodate the email archiving needs of a growing SME.

Flexibility is a necessity for many SMEs looking to implement an email archive solution, and the SntryML Email Archive Appliance requires no third-party software or application integration while offering a backup email server and additional email storage.

SntryML Email Archive Appliance

Capture, index, and archive email messages from servers; enables users to search electronic records for compliance, e-discovery, and knowledge-sharing business needs

(800) 568-2578

www.Processor.com/SntryML



Manage Your Network Remotely With Adder's ipeps

The Virtual KVM Switch

ADMINISTRATORS WHO WANT to implement remote management and control of their computing resources using KVM over IP and who want the enhanced performance that comes with an "on chip" implementation, should take a look at Adder's

AdderLink ipeps product line. The new line will be released in Q3.

The IP engine per server, or ipeps, approach, according to the company, minimizes user contention and maximizes availability. Central to this approach is the functionality that pro-

vides users with a "virtual KVM switch" that can encompass an entire network.

KVM over IP is a technology that gives a user remote control of a computer over a LAN or WAN as if he was sitting in front of it with a monitor, keyboard, and mouse. In the case of AdderLink ipeps, Adventiq's KVM over IP system-on-a-chip implementation is used to provide a hardware-based solution in a small, palm-sized form factor.

Adventiq manufactures ASICs specifically designed for KVM over IP applications. The company's ARQ3 is the product used in Adder's AdderLink ipeps line and, according to Adder and Adventiq, provides substantial performance advantages over other KVM over IP products.

The products use RealVNC's software as the remote user interface. Adder's KVM over IP products have been designed jointly with RealVNC and allow for the remote management of computers without the need to install software on servers that require management. All that's required is a KVM connection to the computers or servers requiring remote management and control.

Users can download the RealVNC client

from the ipeps unit or from the RealVNC Web site free of charge, or they can use a standard Web browser. VNC (virtual network computing) is software that allows users to interact remotely with a computer. In the most common implementation, a VNC view-

APRIL 20, 2007

er installed on the client computer allows a user to remotely control a computer that has a VNC server installed. With Adder's implementation, the hardware device (such as the AdderLink ipeps) provides the server functionality.

Addel Ellik

\$450

Provides hardware-based KVM over IP functionality based on an IP engine per server architecture

(888) 932-3337

www.Processor.com/ipeps



ANTIVIRUS/ANTISPYWARE

APRIL 20, 2007

Security For Your Mobile

Trend Micro Adds Support For Symbian-Based Mobile Devices

MOBILE DEVICES are not immune to attacks from multiple types of threats. They also pose a risk to your corporate network if you don't have some type of protection in place. While antivirus software for your mail system is a good start, it might not catch every potential threat a mobile device could present.

Trend Micro is well known for its broad portfolio of security products. In the mobile space, it offers TMMS (Trend Micro Mobile Security) 3.0. This product has been shipping since November 2006 for Windows Mobile 5.0 devices and has

added support for Symbian-based OS 9.1/S60 devices.

Brent Frerck is a senior technical engineer with Mary Kay Cosmetics. "We have a corporate security policy that dictates a multilayer approach to authentication and virus protection. We're evaluating Trend Micro Mobile Security 3.0 to add an additional layer of protection to deal with the many different potential risks a smartphone represents. Primarily, we're trying to guard against situations where a user might connect to an outside source, such as a home network or an

ISP's mail server, and then introduce a virus either through mail or when syncing their device to a desktop machine," says Frerck.

TMMS 3.0 provides integrated antivirus and antispam for wireless handhelds. It also includes a built-in firewall for Wi-Fi-enabled devices to protect against that type of threat. The antispam feature also blocks SMS (short message service) spam that has become a major nuisance for many mobile device users.

As new threats are identified, automatic updates to the software are accomplished either over-the-air or through a local PC using ActiveSync. Any suspicious code will be isolated on the mobile device before it has a chance to infect the corporate network. A central management point automates the deployment of

updates to ease the IT administrator's task and provides the tools necessary to configure the software to match corporate policies.

Trend Micro Mobile Security 3.0 for Symbian

\$34.95 per device for one year of coverage

Latest revision adds support for Nokia E series devices based on the Symbian operating system

(408) 257-1500

www.Processor.com/TrendMicro-Mobile



TAPE LIBRARY

APRIL 20, 2007

The Best Of Both Backup Worlds

Spectra T950 Combines Robotic Tape With Virtual Tape

BUSINESSES HAVE BEEN using tape libraries for years to store backup tapes and archive aging or unwanted data. More recently, disk vendors have attempted to subvert the tape storage market using what is called a virtual tape library, or VTL—an array of disks that masquerades as a tape drive. Backup software that is programmed to send data to tape is happy to send it to its virtual equivalent.

Spectra Logic attempts to put the best of both worlds in one box. Both functions—robotic tape library and VTL—are combined in one machine. The Spectra T950 can be expanded from one to eight frames. That

provides a maximum of 16PB (petabytes) of capacity, more than enough for most operations.

"Hard drives and tape slots are stored in packs of 10 within the unit," says Molly Rector, vice president of product management and marketing at Spectra Logic. "Customers can choose the right configuration for their needs—all tape, all disk, or a combination of both."

In addition, integrated partitioning is included. Through the

front panel of the library or via a Web-based interface, a user can set up a partition, which would include a subset of the total number of tape slots and drives. This partitioning capability, says Rector, can be utilized in a variety of ways, including connecting one

partition to a different backup application than the rest of the library; segmenting different media types, enabling the unit to utilize several tape formats at the same time; and enabling data encryption to only one portion of the library.

The device provides some of the strongest levels of encryption available, 256-bit, which meets demanding federal government requirements. This combo of tape, VTL, and built-in encryption, says Rector, makes the Spectra T950 unique in the marketplace. A total of 10,050 tape slots and 120 tape drives are available when all eight frames are deployed.

Spectra T950

Begins at \$100,095 for one frame; \$240,250 for eight frames

A complete data protection platform that offers tape, VTL, encryption, and compression in a single storage solution that scales to more than 16PB of storage

(800) 833-1132

www.Processor.com/T950



MarketPlace -



NEWS



Government Gets C- For Security

THE ANNUAL FEDERAL Computer Security Report Card issued by the House Committee On Oversight and Government Reform showed slow but steady progress when it comes to improving the security of government agencies. Eight agencies, including the Office of Personnel Management and Department of Justice, received A grades; another eight agencies, including the Department of Treasury and Department of Defense, received failing grades. The House committee grades each agency based on its ability to detect and respond to intrusions, security training offered to employees, and adherence to security standards. At a news conference, Rep. Tom Davis of Virginia said that "challenges remain" but that "there are some excellent signs of progress in this year's report, and that's encouraging."

IRS To Encrypt Laptops

THE U.S. INTERNAL REVENUE SERVICE has announced plans to encrypt all its notebooks within the next few weeks, following an audit that revealed the agency was not sufficiently protecting sensitive data on its laptops. Of the 100 laptops the auditors from the Treasury Inspector General for Tax Administration tested, 44 had "unencrypted sensitive data, including taxpayer data and employee personnel data." The auditors also found that between Jan. 2, 2003, and June 13, 2006, almost 500 laptops went missing from the IRS. IRS Commissioner Mark Everson spoke on National Public Radio and said the agency is nearly finished encrypting its notebooks, although it has a few dozen left to do.

AMD Issues Earnings Warning

AMD EXPECTS ITS FIRST QUARTER revenue to be well below analyst expectations. The company predicts its revenue for the most recent quarter will be about \$1.23 billion; analysts had predicted the revenue to be more than \$1.5 billion. AMD says it plans several cost-cutting measures as it continues to lose market share with computer resellers. The restructuring changes announced include reducing capital expenditures by \$500 million, reducing discretionary expenses, and only filling critical employee positions.

Oracle Releases Patches For 37 Flaws

FOLLOWING ITS JANUARY release of 51 patches, Oracle has announced it will release 37 new fixes as part of the company's patch cycle that occurs every quarter. On the company Web site, Oracle says this batch of patches includes fixes for seven vulnerabilities that are considered serious and could leave systems that are running the flawed software vulnerable to a remote attack. The Critical Patch Update breakdown includes 13 for Oracle's database products, 11 for E-Business Suite, five for Application Server, four for J.D. Edwards and PeopleSoft products, and a few others.

Former CA Exec To Pay Restitution

SANJAY KUMAR, FORMER CEO of CA, will pay almost \$800 million in restitution to CA investors. The restitution is part of an agreement after Kumar plead guilty to conspiracy to inflate the company's sales and then interfering with a federal investigation by lying to investigators and bribing a potential witness. Under terms of the agreement, Kumar will pay about \$52 million this year, which is the majority of his assets. Kumar has also been sentenced to 12 years in prison related to the case; after serving the prison sentence, the government can garnish 20% of Kumar's wages in an effort to recoup the remaining restitu-

■ CA May Sue Co-Founder

SHORTLY AFTER THE ANNOUNCEMENT that former CA CEO Sanjay Kumar would repay CA shareholders almost \$800 million, CA released a report saying it blames co-founder Charles Wang for the company's accounting fraud. A Special Litigation Committee formed by CA released the report and recommends suing Wang for damages and the value of company stock given to Wang. The report said Wang "directed and participated" in the company's accounting fraud. Wang released his own statement blaming Kumar for the fraud.

VoIP Use On The Rise

ACCORDING TO A RECENT study by research firm In-Stat, 20% of all U.S. businesses have adopted VoIP, and the number continues to climb. In fact, by 2001, some form of VoIP will be in place at two-thirds of U.S. businesses, according to In-Stat analyst David Lemelin. Lemelin also found in a recent study that those businesses that adopt VoIP also keep traditional voice lines; TDM (time-division multiplexing) accounts for 44% of the voice lines in the 20% of businesses using VoIP. These companies are also using VoIP-type services from traditional carriers, including Verizon Communications and AT&T.

Microsoft Expects Sales Boost In China

ANTICIPATING A SURGE from new products and a nationwide focus on eliminating rampant software piracy, Microsoft predicts sales in China will increase by more than 20% this year. As part of China's efforts to crack down on piracy during the past two years, the majority of domestic computer sellers, such as Lenovo and Founder, as well as some international sellers, including Dell and HP, have been striving to increase the number of computers they sell that have legal copies of Microsoft's OSes on them. According to IDC, in Q1 2006 (after China implemented its plan in late 2005), about 50% of the PCs sold had legal copies of Windows.

■ RIM Posts Strong Profit

RESEARCH IN MOTION posted earnings of \$187.9 million, or 99 cents a share, for the most recent quarter. RIM, which makes the

popular BlackBerry device, also reported that an informal inquiry the U.S. Securities and Exchange Commission has been conducting into some of the company's stock option grants has been upgraded to a formal investigation. RIM also reported that it added 1.02 million BlackBerry subscribers during the quarter and had an income of \$192.8 million, or \$1.01 per share.

OnForce Names CTO

VENKAT GADDIPATI has been named as CTO and senior vice president of technology at New York-based online IT service provider OnForce. Gaddipati joins OnForce from Upromise Investments, where he served as the CTO and senior vice president. In January, OnForce named Peter Connone as CEO. The company is launching a new marketplace research tool called MarketView Index, which enables users to view the landscape of onsite IT services. In a statement, Gaddipati said, "As this industry continues to evolve, it is critical for service buyers and providers to have real-time access to industry trends and data."

■ Google Draws 64% Of Search Queries

CONTINUING ITS DOMINANCE in the Internet search market, Google showed growth over its competitors, according to Hitwise's study of 10 million U.S. Internet users' surfing habits. Last month, Google's market share rose to 64.1%, up from 63.9% in February and 58.3% last year. Meanwhile, Yahoo!'s share slid from 21.5% in February to 21.3% in March, down from 22.3% a year ago, and MSN Search slipped from 13.1% last year to 9.3% in February to rest at 9.2% in March. A similar study by comScore Networks revealed more conservative U.S. market share estimates for Google of 48.1% in February, up from 47.5% in January.

■ McAfee Releases Report On Cybercrime

McAfee has released its semiannual Sage journal, which is a roundup of security research taking place at the company. According to the report from McAfee's Advert Labs, this year will see cybercrime continue to become more dangerous as online criminals seek ways to become more profitable. Specifically listed in the report is that the use of botnets will increase as hackers have begun to work together to strengthen code. The danger to smartphones will also continue to grow, including phishing attacks and spyware threats. Other technologies that will become increasingly vulnerable include VoIP systems and RFID devices.

WATCH THE

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	April 9 \$	April 16 \$	% change from previous week
Avaya	AV	\$10.98	\$12.42	\$11.82	▼ 4.83%
BEA Systems	BEAS	\$13.28	\$12.37	\$12.38	▲ 0.08%
Computer Associates	CA	\$26.73	\$26.24	\$26.47	▲ 0.88%
Cisco Systems	CSCO	\$20.99	\$26.20	\$26.62	1.6%
Dell	DELL	\$29.72	\$23.71	\$25.53	▲ 7.68%
Electronic Data Systems	EDS	\$26.50	\$27.70	\$28.87	▲ 4.22%
Google	GOOG	\$416.38	\$468.21	\$474.27	▲ 1.29%
HP	HPQ	\$33.10	\$41.34	\$41.19	▼ 0.36%
IBM	IBM	\$82.10	\$96.62	\$96.18	▼ 0.46%
Intel	INTC	\$19.36	\$20.10	\$20.69	▲ 2.94%
McAfee	MFE	\$24.67	\$29.04	\$29.87	▲ 2.86%
Microsoft	MSFT	\$27.29	\$28.57	\$28.73	▲ 0.56%
Oracle	ORCL	\$13.83	\$18.57	\$18.90	▲ 1.78%
Red Hat Software	RHT	\$29.85	\$21.87	\$22.19	▲ 1.46%
Sun Microsystems	SUNW	\$5.11	\$5.93	\$5.86	▼ 1.18%
Symantec	SYMC	\$16.78	\$16.95	\$17.53	▲ 3.42%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Upcoming IT Events

- APRIL -

Gartner Symposium/ITXpo April 22-26 San Francisco, Calif. www.gartner.com/it/sym/2007 /spg9/spg9_home.jsp

. Chicago SecureWorld Expo April 24-25

Chicago, III. www.secureworldexpo.com

> **ASCDI Spring** April 25-28 Las Vegas, Nev. www.ascdi.com

Help Desk

Institute Conference April 30-May 3 Las Vegas, Nev. www.thinkhdi.com/hdi2007

- MAY -

Atlanta SecureWorld Expo May 1-2 Atlanta, Ga. www.secureworldexpo.com

Server Blade Summit

May 1-3 Anaheim, Calif. www.serverbladesummit.com

Gartner Compliance & Risk Management Summit

May 9-11 New Orleans, La. www.gartner.com/it/page.jsp?id =498334&tab=overview

Houston ITEC 2007

May 16-17 Houston, Texas www.goitec.com

Philadelphia SecureWorld Expo

May 16-17 Philadelphia, Pa. www.secureworldexpo.com

> Interop

May 20-25 Las Vegas, Nev. www.interop.com/lasvegas

- JUNE -

Symantec Vision 2007 June 11-14 Las Vegas, Nev. www.veritas.com/vision

> Detroit ITEC 2007 June 13-14 Detroit. Mich.

www.goitec.com

Seattle ITEC 2007 June 20-21 Seattle, Wash. www.goitec.com

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BUYERS' GUIDE

MARKET WATCH

Network Attached Storage

Satiation With NAS Systems

by Chris Jackson

A FAMILIAR AXIOM IN BIOLOGY is that nature abhors a vacuum. And for many IT administrators, there's a corollary: Users will consume as much storage as is available. Fortunately, disk-based storage continues to plummet in price, and NAS (network attached storage) systems provide easy to manage, expandable storage for the small to midsized enterprise market.

Sun Microsystems StorageTek 5220 NAS

The StorageTek 5220 brings high performance with a SATA disk infrastructure expandable to 24TB. Designed around AMD's 64-bit Opteron processor, the 5220 delivers data quickly over quad Gigabit Ethernet ports. In addition, each Ethernet port can be configured in a failover topology to ensure that your mission-critical data is always available.

To protect your data, the 5220 uses a 64-bit journaling file system that helps mitigate potential damage caused by unexpected power outages. Combined with hardware-based RAID, a battery-backed RAID cache, redundant power supplies, and hot-swap-pable power supplies, the 5220 is designed



SNAPSHOT

Sun Microsystems StorageTek 5220 NAS

From \$27,350

Sun's acquisition of StorageTek means Sun shops can now buy servers, storage, and support from the same vendor

www.Processor.com/Sun-5220NAS

to protect and deliver your data regardless of hardware failure.

For companies that need to mirror data to secondary locations, the 5220 supports the StorageTek File Replicator software that can mirror your data to any StorageTek appliance. The 5220 also supports StorageTek's Compliance Archiving Software for companies that operate under regulatory scrutiny. The 5220 also creates checkpoints that help you retrieve mistakenly deleted files or objects, as well as speeding up your data backups.

Users who require high-speed access to the 5220 can bond the four Gigabit Ethernet ports to a single IP address across multiple switches. In addition to its NAS heritage, the 5220 also provides support for block-level access via its iSCSI subsystem. This supports both the Solaris 10 iSCSI initiator as well as Microsoft's iSCSI software initiator.

Isilon Systems IQ200

Isilon Systems knows that adequate storage systems need the flexibility to grow, and it has ensured that its IQ200 can scale seamlessly. Each IQ200 node provides 2TB of storage, with a cluster consisting of a minimum of three nodes interconnected via Gigabit Ethernet interfaces. The result is a single file system powered by Isilon's OneFS operating system software.

Unlike many NAS systems that simply add storage enclosures as system capacity



SNAPSHOT

Isilon Systems IQ200

From \$39,750

Brings cluster technology to NAS, ensuring that as you scale up your storage capacity, your performance scales correspondingly

www.Processor.com/IQ200

grows, each IQ200 node includes processing power, network connectivity, and memory that scale your system performance in correlation with storage capacity. This distributed performance ranges from three nodes providing 6TB of storage to a maximum of 24 nodes for a total of 48TB in a single volume.

The IQ200 also features advanced load balancing for both applications and client connections. When more storage is needed, a new node can be added to the cluster and can be online in 60 seconds. The IQ200 also integrates seamlessly with Isilon's SnapshotIQ, SmartConnect, and SyncIQ software for data snapshots, load balancing, and data replication.

BlueArc Titan 2100

For BlueArc, the goal in creating the Titan 2100 was to demolish previous performance thresholds at an unmatched price. From its throughput to its scalability, the 2100 is a notable adversary for any competition in the NAS arena. Where other competitors are content to provide vast storage capacity, the Titan line is designed to do so for tens of thousands of users, at speeds that can saturate the fastest of networks.

The heart of the Titan 2100 is a hard-ware-accelerated storage subsystem capable of supporting more than 200,000 IOPs and up to 800MBps throughput. The 2100 can support more than 60,000 user sessions and thousands of compute nodes concurrently. Capacity scales as high as 512TB, with file systems capped at 256TB.



SNAPSHOT

BlueArc Titan 2100

Starts at about \$100,000 for 8TB systems

Pulls no punches in delivering gargantuan data sets at high speeds

www.Processor.com/Titan2100

Tiered storage allows the 2100 to take advantage of price reductions in the various disk formats. High-performance data can be stored on Fibre Channel disks while lower-priority data can be delegated to more affordable SATA platters. For companies that require WORM archival storage for regulatory compliance, the 2100 integrates these disks with both FC and SATA disks in a single system.

Delivering data quickly requires a large number of interfaces, and the 2100 boasts six Gigabit Ethernet ports and four Fibre Channel (4GB) ports. In addition to the usual CIFS and NFS support for NAS clients, the 2100 also provides block-level access for iSCSI clients.

Dynamic Network Factory DataStor NAS C2-SA16322

The DataStor C2-SA16322 leverages commodity components to provide outstanding performance and storage capacity at a competitive price. Each DataStor cluster consists of two NAS-Engines connected to at least one storage subsystem. The result? Up to 36TB of storage in only 13U of rack space with a maximum capacity of 128TB per appliance.

The brains of the C2-SA16322 is the NAS-Engine, powered by 2.8GHz Intel Xeon processors, paired with up to 16GB of memory. Each engine has dual copper Gigabit Ethernet ports and dual Ultra320 SCSI controllers. Each engine has hotswappable power supplies, as well as hotswappable SATA disks holding the NAS



SNAPSHOT

Dynamic Network Factory DataStor NAS C2-SA16322

\$35,000

High performance at a modest price through the use of commodity components

www.Processor.com/DS-C2-SA16322

operating system in a mirrored RAID configuration

The muscle of the C2-SA16322 is the Enterprise RAID module. Each module can hold 16 hot-swappable SATA disk drives, powered by dual 460-watt hot-swappable power supplies. Each unit is cooled by hot-swappable cooling fans and a built-in environmental controller.

With disk capacity currently capped at 750GB per disk, each Enterprise RAID module provides up to 12TB of storage in RAID levels ranging from RAID 1 to RAID 50. Management of your volumes is performed via browser over your company network.

Celeros EzNAS XN

The heart of Celeros' EzNAS XN management system is secure Web-based access from anywhere on your network. For users more comfortable with console-based access, the EzNAS provides administration support and also multiple management levels for delegation of distinct admin roles.

Despite its emphasis on ease of management, the EzNAS is no slouch when it comes to either performance or capacity. With storage sizes ranging from 3 to 36TB in a 5U unit, the EzNAS can accommodate most SMEs with aplomb.

In addition to excellent management capabilities and capacious storage, the

EzNAS boasts an impressive array of supported protocols. In addition to the customary CIFS/SMB protocol, it also supports NFS, FTP, and AppleTalk. Like many of



SNAPSHOT

Celeros EzNAS XN

\$37,800

Provides competitive storage with an impressive suite of flexible management utilities

www.Processor.com/EzNASXN

the NAS devices on the market, the EzNAS also offers iSCSI block-level access.

Interoperability is a keystone of the EzNAS. Whether you're using Windows Active Directory, NT-based PDC, LDAP, or NIS for your directory management, the EzNAS integrates seamlessly with your existing network infrastructure. Data protection is also an essential role of any NAS device, and the EzNAS features a journaling file system to allow for faster recovery in the event of an inadvertent system shutdown.

Additional Options

In addition to the previously mentioned vendors, the NAS marketplace is a vibrant bazaar of vendors offering products at pricepoints unheard of in the previous decade. Amongst these vendors are two notable ones: eRacks Open Source Systems (www.Processor.com/eRacks-OSS) and American ProImage (www.Processor.com/API). eRacks specializes in rackmount NAS systems that scale from 1 to 8U, with 40-disk systems storing over 30TB of data. American ProImage provides two NAS systems compatible with SATA, ATA, and SCSI technologies.

Buying Tips

The following are some key tips to ensure your investment in a NAS pays handsome dividends.

Plan for growth. While most NAS systems are designed for future expansion, many low-cost solutions don't scale well. Choose a system that meets your current needs yet has room to grow with your business.

Interoperability is king. The days of homogenous network environments are over. Today's network consists of Unix/Linux systems, Windows servers and clients, and OSX-based systems. Be sure that in addition to CIFS/SMB support, your NAS system supports NFS and AppleTalk, if necessary.

Plan for updates. Make sure your vendor provides routine maintenance and security updates for your system.

To see *Processor* Showcase advertisements for products in this category, look online at www.Processor.com and find the Networked Attached Storage ads under End Nodes/Storage.

MONITORING APRIL 20, 2007

Keep Your Systems In Check

New SCOPE Makes It Even Easier

HIGH-AVAILABILITY and disaster recovery software company Neverfail has enhanced its system monitoring capabilities by providing a new version of its server check, optimization, and performance evaluation tool. SCOPE is designed to ensure the reliability and performance of an organization's server environment.

"We are providing a proactive reliability tool," says John Posavatz, vice president of product management for Neverfail. "This is something that our customers can utilize to stop issues from ever occurring. There is no way any single IT admistrator can know everything about all the hardware and software services packs in all the various permutations, but now that kind of information can be accessed on an ongoing basis."

Neverfail's SCOPE system analysis tool has been used for the past three years in conjunction with the company's product line of high-availability software for such applications as Microsoft Exchange, Lotus Domino, RIM Black-Berry, SQL Server, and SharePoint. Until now, SCOPE has been utilized by Neverfail customers prior to the installation of one of the core products. With the new version, SCOPE will provide server health checks on a continuous basis. SCOPE is used to inventory and determine current server conditions, as well as to ensure proper installation and operation of the application software.

"It was a great tool, and our customers and partners really started to appreciate the benefits and wanted to keep it running nonstop," Posavatz says. "If there is one thing with IT that is inevitable, it is change. Just because a system was properly configured at the start, it doesn't mean they are safe a week, a month, or even a day later."

Neverfail expanded the operation of SCOPE by leveraging the growing database of installations of its core software products. Known problems, solutions, and other analysis can be correlated across different end-user types. The information is continuously updated with new input from the installed customer base. The SCOPE analyzer validates system setup and operation against established best practices and provides the end user with recommendations.

Neverfail is offering a SCOPE Lite version of the product as a free download on its Web site. SCOPE Lite provides users with a basic inventory of equipment within the infrastructure, software on the systems, and software versions being run.

Neverfail SCOPE Systems Free with installation of Neverfail application module Provides users with continuous analysis for server check, optimization, and performance evaluation (512) 327-5777 www.Processor.com/Neverfail2



POWER PROTECTION

Protecting Critical Data Center Loads

Staco TreStar P Series UPSes Eliminate Overloads, Flicker & More In Real Time

THE STACO TRESTAR P SERIES of UPSes is designed to meet the power protection needs of today's most sensitive critical loads. The P Series' new digital control

system eliminates all overloads, frequency variations, transients, flicker, and blackouts in real time. And it processes signals 10 times faster than previous analog methods.

UPS reliability begins with design. With a true online, double-conversion design, the TreStar P Series isolates your connected loads from utility power and provides clean, regulated

output voltage and frequency. The TreStar P Series was designed with

the end user in mind. It offers the highest quality, along with the reliability you expect. It is easy to install and has a userfriendly front control panel with an easyto-read LCD menu. Its advanced battery management system reduces the frequency of maintenance and replacement schedules, saving you time and money.

Staco TreStar P Series

125-150kVA model

Staco's TreStar P Series comes in two versions: 125-150kVA and 180-225kVA. The 125-150kVA is parallelable for capacity or redundancy, with up to eight modules, and features a 0.9 output power fac-

tor, vector-controlled IGBT inverter, input circuit breaker, internal maintenance bypass, advanced battery management, and an optional 7% harmonic filter.

March 30, 2007

In addition to all the features found on the 125-150 model, the 180-225kVA model also features state-of-the-art communications. matching battery cabinets with internal disconnect, top and bottom cable entry, and a standard 7% harmonic filter.

Other optional features include:

- SNMP Adapter
- External Maintenance Bypass
- Parallel kit
- Network Solutions software
- Extended battery runtimes
- Extended warranties
- Preventative maintenance

True online, double-conversion UPS with a digital control system designed to process signals faster than analog methods

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APRIL 13, 2007

Cooling For Cramped Spaces

MovinCool CM12 Ceiling-Mounted Unit Designed To Save Space & Money

SPOT COOLING IS an energy-efficient alternative to central air conditioning. But often the main roadblock to efficient cooling of cramped server telecom and equipment rooms is the lack of floor space to accommodate a roll-in portable spot cooler. The MovinCool CM12 offers a convenient

solution: It's a lightweight, space-saving, easy-to-install ceilingmounted unit.

The CM12 delivers 10.500Btu/H of cooling in a self-contained unit that mounts easily with off-the-shelf hardware. It connects to a standard 115V, 15-amp circuit.

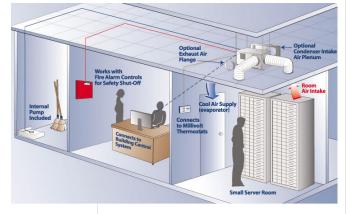
The CM12 features the shortest top-to-bottom profile in the industry—

only 15.5 inches—ensuring it will fit into nearly any drop ceiling. In addition, the CM12 comes with several cost-saving capabilities and safety features:

- · Conveniently controlled by most offthe-shelf Millivolt thermostats
- · Works with fire alarm controls for safety shut-off
- Self-contained system requiring no refrigerant piping
- Built-in supply and return air flanges enable easy duct installation and improved air circulation
- · Warning signals and alarms for condensation overflow and unscheduled shutdown can be wired to a central location
- A standard internal pump

· Mounting brackets designed for off-theshelf mounting hardware

In addition to the CM12, MovinCool offers the Office Pro lineup of portable spot cooling solutions for low-temperature equipment cooling; the Classic and Classic



Plus Portable Series for harsh environments; and the PC7 Portable Air Conditioner for individual hot spots.

Offers an energy-efficient, space-saving alternative to central air conditioning

\$2,786

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www.Processor.com/MovinCool





Lose that important file?

Now with version protection for Microsoft® Office files

According to the New York Times, file loss costs businesses an estimated \$13 billion per year. The problem is that the Windows® recycle bin doesn't capture every deleted file, particularly files deleted over the network and older "saved-over" versions of Microsoft Office files. Not even your backup system provides comprehensive real-time protection.

Now you can get complete up-to-the-minute file protection with instant recovery—get new Undelete 5!

- NEW! Version protection allows instant recovery of older versions of Microsoft Word, Excel and PowerPoint® files
- EXCLUSIVE! Recovery of deleted files is easy and instant
- EXCLUSIVE! Undelete 5 captures and protects all deleted files in real time — even files deleted by other systems over the network. No more lengthy backup restores!
- · Server and workstation editions available

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SERVER

Complete Intel Server Systems

Save Time & Reduce Operation Costs With A Dual-Core Intel Xeon Processor In Your Servers Direct System

SERVERS DIRECT is now offering two Intel-based products designed for the small to midsized enterprise: the SDR-6015T-TB 1U Data Center Clustering Server and the Intel Server System SR1530AH.

1U Data Center Clustering Server

The SDR-6015T-TB uses Servers Direct 1U Twin, an innovative 1U rackmount system designed to increase computing density while reducing cost, energy, and space requirements. With two systems (or two nodes) within a 1U space, the 1U Twin can support up to 16 processor cores (two systems both housing dual quad-core Xeon 5300 Clovertown CPUs).

With the SDR-6015T-TB, you get:

• Two nodes in one 1U system, saving chassis, power supply, and rack costs • Double the density and computing power, saving IT space rental costs

• Higher power utilization, which increases power supply efficiency and saves energy costs



The SDR-6015T-TB clustering server supports up to 16 processor cores.

- · Reduced number of power cables and power strips for easy cabling, better airflow, and reduced cabling costs
- The ability to operate and maintain two systems in one physical space, saving maintenance and management costs

• A system that's perfect for HPC computing cluster, data center or data farm, search engine nodes, and high-availability applications

Server System SR1530AH

Small and midsized enterprises often find themselves cramped for space. That's where products such as Servers Direct's Intel Server System SR1530AH



The SR1530AH is ideal when space is at a premium.

come in. The Intel Server System is an extremely short (20-inch) 1U rack-optimized system.

It's designed with great performance and reliability in mind. Features such as Intel Virtualization Technology and Intel Extended Memory 64 Technology support the latest software available, while dualchannel DDR-2 with ECC support and Intel Matrix Storage Technology ensure servers automatically detect and correct problems in memory, safeguarding your important data.

The SR1530AH comes with a multicore Intel Xeon processor based on Intel Core microarchitecture for enhanced performance and energy and power efficiency; an Intel 3000 server chipset for enterpriseclass performance and reliability; dualmemory channel and four DIMM slots for improved system uptime; and dual Gigabit Ethernet connections for ample bandwidth.

Full Product Lineup

In addition to offering these two Intelbased products, Servers Direct offers a complete lineup of Intel-based servers, server peripherals, and components. All Servers Direct systems are manufactured under an ISO 9001:2000-certified process.

Servers Direct SDR-6015T-TB 1U

Starts at \$2.150

Fully customizable up to two-node system in a 1U form factor

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www.Processor.com/1UTwin

An extremely short, 1U rack-optimized system for cramped spaces

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www.Processor.com/SR1530AH

Servers ► DIRECT

Features Compared

SDR-6015T-TB

- Dual-processor guad and dual-core Intel 64bit Xeon support
- Up to 32GB DDR2 667 & 533 SDRAM fully buffered DIMM (FB-DIMM)
- 2x Intel (ESB2/Gilgal) 82563EB dual-port Gigabit Ethernet controller
- 2x hotswap SATA drive bays
- 900/980W high-efficiency power supply

SDR-6015T-TB

- · Multicore Intel Xeon processor based on Intel Core microarchitecture
- · Intel 3000 server chipset
- Dual memory-channel, four DIMM slots for DDR2 533/667MHz unbuffered ECC/non-ECC (8GB max) automatically corrects single-bit errors
- Dual Gigabit Ethernet connections provide ample network bandwidth with options for separate subnets and redundant links

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Ideal solution for a stable business-critical application server that minimizes deployment and support costs

- 2U Chenbro Rackmount Chassis with 600W power
- Server Board with Intel® 5000V (Blackford VS) Chipset
- Intel Dual-Core Xeon 5030 Processor 2.6GHz 667MHz
- Total 1024MB, 2pcs x 512MB Kingston DDR2 533MHz FB-DIMM ECC
- Seagate SATA II 80GB 7200 RPM 8MB Cache SATA 3.0Gb/s Hard Drive
- 6 x 1" Hot-swap SATA Drive Bays
- Intel® (ESB2/Gilgal) 82563EB Dual-port Gigabit
- Intel ESB2 SATA 3.0 Gbps Controller RAID 0, 1,5, 10

\$1,299

SDR-3111T



Designed to deliver exceptional availability, simplified manageability, outstanding performance and revolutionary scalability to help you build a cost-effective, flexible

- * 3U Chenbro Rackmount Chassis with 600W power supply
- * Intel S5000PSLSATA Xeon 5000P Server Board
- Intel Dual-Core Xeon 5030 Processor 2.6GHz 657MHz
- Total 1024MB, 2pcs x 512MB Kingston DDR2 533MHz FB-DIMMECC
- Seagate SATA II 80GB 7200 RPM 8MB Cache SATA 3.0
- * 12 x 1" Hot-swap SATA Drive Bays
- Dual-port Gigabit Ethernet Controller * Intel SATA 3.0 Gbps 6-PORT Controller RAID 0, 1, 10
- STARTING \$1,699

SDP-7045B-TR+B



Ideal choice for small businesses looking for their first server or to upgrade an existing server

- * Supermicro 4U Rackmountable / Tower Chassis with 800W High Efficiency Redundant Power Supply
- * Intel Dual-Core Xeon 5030 Processor 2.6GHz 667MHz
- Total 1024MB, 2pcs x 512MB Kingston DDR2 533MHz
- * Seagate SATA II 400GB 7200 RPM 16MB Cache SATA 3.0Gb/s Hard Drive
- * 8 x 1" Hot-swap Drive Bays
- * Intel® (ESB2/Gilgal) 82563EB Dual-port Gigabit Ethernet Controlle
- * Intel ESB2 SATA 3.0Gbps Controller RAID 0, 1, 5, 10

STARTING \$1,999

SDR-5500T



True SATA II 3Gb/s storage server configured with dual Xeon CPUs and room for a tape backup

- * AIC 5U Rackmountable with 950W Triple Redundant Power
- Intel® 5000P (Blackford) Chipset
- * Intel Dual-Core Xeon 5050 Processor 3.0GHz 667MHz
- Total 1024MB, 2pcs x 512MB Kingston DDR2 533MHz
- * Seagate SATA II 400GB 7200 RPM 16MB Cache SATA 3.0Gb/s Hard Drive
- * 24 x 1" Hot-swap Drive Bays
- Intel® (ESB2/Gilgal) 82563EB Dual-port Gigabit Ethernet
- * Intel ESB2 SATA 3.0Gbps Controller RAID 0, 1, 5, 10

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Control Who & What Is On Your Network

Lockdown Enforcer Delivers Powerful & Precise Network Access Control

LOCKDOWN NETWORKS' Lockdown Enforcer puts IT back in control of the network by automating access policies to keep the network safe from at-risk devices and unauthorized users. With Enforcer, all devices on the network stay in continuous compliance with security policies and access to networks is smoothly automated, even for guest users.

Lockdown Enforcer supports all networked devices and is an overlay to existing networks. And as an out-of-band appliance, it won't slow your network down and will scale to support next- generation networks, even 100G.

Powerful Policy Engine

Lockdown Enforcer's Precision Policy Engine integrates identity, device health, location, and other factors to determine which network users should be on the network and to assist in device remediation when compliance problems occur. Authentication and other policy inputs place devices into production, guest, and private quarantine VLANs. If a device is

quarantined for "health" violations, a Rich Quarantine Environment enables end users to self-remediate their systems without helpdesk support.

A new feature for Lockdown Enforcer is the ability to directly input syslog notifications into policy actions, enabling any IPS,

IDS, NBA, or other security system to trigger policy actions, from quarantine to notification.

Enterprise Features

Lockdown Enforcer integrates with any managed switch and most popular WAPs. No hardware or software upgrades are required. It communicates with managed Layer 2 switches via SNMP and a command-line interface and provides the same coverage for wireless access points.

Support for multiple authentication mechanisms. Enforcer supports 802.1x port-based authentication, Windows authentication, RADIUS, and Web logon ensuring the most appropriate type is applied to users and devices.

Agent or agentless device assessment. Enforcer audits devices for virus and spyware protection, personal firewalls, OS versions, patches, DHCP servers, unauthorized services, and more. Enforcer uses agentless scans to ensure minimal impact on client devices.

Integrated authentication server. Enforcer works with existing RADIUS servers and also includes a standalone authentication capability using a built-in RADIUS server.

Integrates with Directory Services. Enforcer's native LDAP support ensures compatibility with popular enterprise directory services, letting you utilize user and group membership data to create policies at the group or individual

High availability. Lockdown Enforcer is available in a 2U form factor, with redundant processors, disks, and power supplies. Both the 1U and 2U versions of appliance can operate in redundant pairs for maximum network availability.

Automatic access. Enforcer dynamically assigns users to production, guest, or quarantine VLANs based on policy. Lockdown uses private VLANs to ensure quarantined devices are isolated from one another.

Configurable audits. Enforcer allows audits to be designed to suit specific requirements. In addition to preset scans, you have control over audit depth and schedules.

Syslog integration. Allows IDS, IPS, NBA, or other systems to directly trigger policy actions.

Aggregates and baselines vulnerability data. Enforcer combines real-time and historical audit results to increase accuracy of assessment and establishes baselines



to create effective, actionable data, avoiding unneeded quarantine events.

Centralized reporting. Enforcer generates real-time and historical reports available in a number of exportable formats. Consolidated data can be presented using predefined or custom formats to support enterprise-wide management, operations, and compliance needs.

Workflow and notification. Lockdown NAC supports two-way integration with help desk and enterprise management software and integrates with workflow ticketing systems to accelerate remediation. Tickets are automatically assigned based on policy and output is generated via email, Syslog entries, or SNMP traps.

Backup/restore. Configuration and audit/enforcement data can be uploaded or downloaded to any workstation with a Web browser. Lockdown includes a tool to automatically generate backup files.

All-in-one NAC appliance that ensures all networked devices adhere to device security policies

(866) 844-8080

www.Processor.com/Enforcer



		Enforcer Hardware Spe	cifications	
	Processor	Network Interface	Power Supply	Weight
Lockdown 1U	Celeron	1 x 10/100/1000 Ethernet	1 300W ATX, PSU with PFC power supply	15 pounds
Lockdown 2U	Dual Xeon	1 x 10/100/1000 Ethernet	1 500W ATX, PSU with PFC power supply	46 pounds

PHYSICAL INFRASTRUCTURE

Meeting Data Center Physical Needs

Rittal RimatriX5 Package Combines Racks, Cooling, Monitoring & More

RITTAL'S RIMATRIX5 is the integral, scalable, and efficient system solution for ultimate IT performance. The RimatriX5 incorporates a number of unique products:

Server and network racks. With RimatriX5 server racks you take delivery of a system platform with perfectly matched climate control, power, and security solutions. RimatriX5 places emphasis on maximum packing density and efficient space utilization. Flexible configuration of the IT racks improves TCO and helps lower the day-to-day rack operating costs.

Data center power. Interruptions to critical business processes, whether due to hardware faults, production breakdowns, communications failures, or insufficient or nonexistent protection against voltage fluctuations, can have far-reaching consequences. With RimatriX5, the demands with regard to redundancy, scalability, and maximum availability are bundled into a single system. The solutions help reduce costs and boost the availability of the overall system. It is even possible to retrofit new modules without interrupting operation.

Data center cooling. The RimatriX5 offers passive cooling utilizing the ambient air; active, rack-specific cooling, and high-performance cooling for temperature-neutral data center expansion. In each case, the systems are tailored to your needs and application requirements, taking into consideration all ambient conditions. Software-assisted planning tools

minimize investment outlay and provide for maximum peace of mind.

April 20, 2007

March 30, 2007

Data center security. With the CMC-TC Rittal offers a modular monitoring system with optimum protection for IT racks and rooms. Because the system is modular, it can be adjusted to the individual requirements of the existing infrastructure. Extension and retrofitting are also possible.

Data center monitoring. When it comes to security and remote maintenance, RimatriX5 offers full service from a single partner. From a single software interface, you can analyze and control the temperatures of racks or components, check the operating status of the UPS backup, monitor video surveillance for the rooms and equipment, and evaluate the power management and battery needs.



A comprehensive data center solution encompassing racks, power, cooling, security, and monitoring

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April 20, 2007

Testing Your Disaster Recovery Plan

It's One Thing To Have It, **But It's Critical To Test It**

by Chris A. MacKinnon

IF YOU HAVE A FIRE ALARM in your home, you should test it on a regular basis to minimize the opportunity for disaster. Similarly, most small to midsized enterprises should have some type of DR (disaster recovery) plan in place. However, few actually ever test the plan, let alone test it on a regular basis. So what goes into a DR plan test? Is it important to test every portion of the plan? If so, how is this done?

First Things First

Bruce McFarland, director of marketing at Anue Systems (www.Processor.com/Anue Systems), says under realistic conditions, you can't be confident that your DR plan, systems, and processes will work unless you test them. McFarland says, "Successful businesses are naturally focused on increasing sales and customer satisfaction and responding to immediate problems, and it's not uncommon that these activities push DR planning and testing to the back burner."

Stephen Lawton, senior director of strategic marketing for Acronis (www.Processor .com/Acronis-Co), says disaster recovery plans are like life insurance. He explains, "You buy it because you should, but you hope you never need it and seldom evaluate it. DR plans require you to consider problems most companies hope they never face. It's not easy, and if you run your company well, you rarely face unanticipated systems failures or interruptions in service." Lawton says it requires management and staff taking time away from focusing on profit in order to test something that they hope never happens.

What's In A Test?

McFarland says for SMEs, DR plan tests typically begin with component and subsystem tests and then build up to full-scale system tests in a live operational environment. "Since these tests can be disruptive to business operations," he says, "companies are increasingly relying on lab testing with network emulators to conduct rigorous and realistic tests prior to the fullscale deployment and testing in the production environment."

According to McFarland, lab testing with a network emulator enables companies to repeatedly subject network applications, DR systems, and processes to the requirements and impairments of a real-world network environment. He says, "With this rigorous and authentic testing in the lab, full-scale system tests in the production environment can be done less frequently. Most network application and DR plan testing can be done without the expense of replicating the corporate network and without disruption to the production IT environment." On top of this, McFarland says a robust test plan also needs to include tuning and debugging of issues that arise during the test.

Lawton, on the other hand, says creating server images and having alternate sites identifying server locations (should an is supposed to do and when it should be tested. "Do your engineers know who is supposed to be restoring systems and who should be working on solving the problem? Do they know the right processes for doing a restoration? Is additional training needed for your backup software?" Other important components to consider include getting to your backups quickly,

make sure other staff know what a DR plan

Lawton says. "If all backups are stored on tape and taken offsite, how long does it take to get those tapes back? Do you have compatible hardware and software at a remote site to restore the tapes? Are the tapes near the restoration site?" A better way to

> back up in some cases, Lawton notes, is by using disk-based backup that can be located anywhere and restored over IP. "That way," he says, "it doesn't matter where your DR servers are located."



When it comes to deciding which components are more important to focus on, McFarland says, "You only need to test the parts that have to work." He continues, "Levity aside, you can't be confident that the DR plan, systems, and processes will be effective unless you test them

and verify their performance under realworld conditions. Ultimately, this will require end-to-end testing with the actual systems, network, personnel, and procedures under actual operational conditions." McFarland says a DR test plan should be designed in phases, which build up to a fullscale end-to-end test. He says early phase system and component tests in the lab should stress the systems and components believed to be most crucial to overall application performance.

Lawton says leaving parts of a plan untested can leave you open to points of failure. He says, "How do you know you can access a remote router; have you tried? Are you certain your network settings from one network will work correctly if you place the image on another network?" Lawton says if problems occur, they should be documented, along with any potential fixes. "That way," he says, "if a disaster strikes, you're not running a backup for the first time. You can ensure your data is safe."

Lawton says there are numerous sites on the Web where you can obtain information on what makes a good DR plan. He says, "One thing for sure, however, there is no one-size-fits-all plan. Each plan needs to be customized to meet the company. No two companies have exactly the same types of data, same IT staff, same needs for downtime, and the like. Creating a plan that meets your specific needs is crucial."

The Repercussions

It is critical for small to midsized enterprises to have a disaster recovery plan in place. Two industry experts expound on the repercussions of not having a DR plan.

Stephen Lawton, senior director of strategic marketing for Acronis (www.Processor.com/Acronis-Co)

"In the event of a disaster, the worst-case scenario for a company that doesn't have a DR plan is simple and extreme: The company goes out of business. According to the U.S. Bureau of Labor Statistics, 93% of all companies that experience 'significant data loss' are out of business within five years. The message here is clear: Lose your data, lose your company. The best-case scenario is that your company suffers significant data loss, sales are lost, and your company suffers a major interruption. Your customers aren't happy. Your suppliers aren't happy. Your staff isn't happy. Maybe I should amend this to say that the best-case scenario is that there is no disaster; unfortunately, that's not a realistic expectation. Hardware fails. Files get accidentally deleted. Human error causes unanticipated problems."

Bruce McFarland, director of marketing at Anue Systems

(www.Processor.com/AnueSystems)

"As businesses become increasingly dependent on their IT systems and data, a DR plan is essential to their survival and success-both for business and regulatory reasons. Most businesses today rely on key systems, networks, and data for every aspect of their operations. If these go down (or their data becomes unavailable), the company is effectively out of business. So the key question in devising a DR plan is 'How long can we afford to be out of business, and what kind of systems and processes do we need to implement to achieve this level of availability?' On the regulatory side, the requirements of Sarbanes-Oxley, Gramm-Leach-Bliley, HIPAA, FISMA [Federal Information Security Management Act], ISO 17799, and other regulations have raised the bar for data protection, security, and availability-and increased the need for DR capabilities and effective testing."



emergency occur), are both key items when testing a DR plan. "Part of the test," Lawton says, "would be to take the image of your server, install it onto the remote server, bring up the system, and see how long it takes to have the server operating at full capacity. We recommend that you test the image on a different piece of hardware than the one you normally use. The reason: If your hardware becomes damaged due to a fire, flood, or simple motherboard failure, you might not be able to use the exact same piece of hardware."

Running similar tests with workstations and laptops is also recommended, Lawton says. "Remember, approximately 60% of all corporate data resides outside the data center on laptops and desktops. Again, test restoring those images to dissimilar hardware." Lawton says it is also important to

SERVER APRIL 6, 2007

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Purchasing Equipment During A Disaster

Solution: Multiple Sites In Multiple Locations

by Julie Sartain

AFTER A DECADE OF SERIOUS DISASTERS, most companies have been shocked and terrified into developing a sound, proven disaster recovery plan—but fortunately, for the bulk of them, they have never had to use these procedures. After Hurricane Katrina, the horror stories flourished, and these same companies began to question whether their companies could actually survive a major disaster, regardless of their proposed plans.

We asked several companies across the globe to tell us how they handle purchasing equipment and getting supplies during a disaster. The responses were varied, interesting, and, in some cases, surprising.

Mark Hodgen, part owner and IT director at StockPhotoSuite.com, says with the Internet and a good T1 connection, companies can quickly move data in minutes, so most companies have the ability to create multiple backup sites across the globe to house their information. "The problem," notes Hodgen, "is relocating primary IT support personnel and key users, during a disaster, to administer those systems."

Purchasing equipment during a disaster is, naturally, based on the level of damage. A tornado that touches down on only 10 buildings in a city the size of Dallas may not affect normal purchasing procedures. In contrast, a hurricane that devastates an entire coastline from Mobile, Ala., through Mississippi and then across New Orleans and southern Louisiana could alter an entire city's purchasing procedures.

"The best advice we can offer," says JD Stratton, designer and network administrator at Ukiah Multimedia, "is to set up and maintain multiple purchasing sites and personnel in different parts of the country using



Web-based databases to order, purchase, record, track, and deliver merchandise from multiple, pre-approved vendors scattered across the country that we already have established accounts with. This process is likely no problem for large companies with multiple locations in different states but can present a real issue for the smaller, single-site business such as ours. Our solution was to hire an independent contractor back East to handle all of our disaster recovery issues."

And that's an excellent option for smaller, single-location companies or even organizations such as banks that are often scattered across a single state but never cross its borders. FusionStorm (www.Processor.com/FusionStorm), headquartered in San Francisco but with offices all over the

United States, is just that type of contractor—a national provider of technology solutions for enterprises of all sizes.

"We combine best-of-breed products from leading vendors with a full suite of professional and managed services to help our clients save money and grow their businesses," says Josh Krasnegor, vice president of marketing at FusionStorm.

"We handle it all," says Krasnegor. "Our clients typically rely on us to purchase equipment during or after a disaster. Most clients have an IT 'decision maker' such as the CIO or IT director (purchasing authority falls, mainly, to the IT director) and/or a team of engineers who approve purchases. Then we take over and deliver products (equipment, merchandise, etc.) and services in an average recovery time of eight to 12 hours."

"Certainly, more dire circumstances take longer," says Krasnegor. "For example, after Hurricane Katrina, our engineers were deployed to Baton Rouge, La., because the New Orleans data center was destroyed. The engineers deployed several large storage arrays for LSU—they did not have a DR plan in place at that time. This deployment took five days, which, compared to many other DR companies, was incredibly fast."

Disaster Tips

Here are some tips for how to prepare in case a local disaster affects your company.

- Inventory all company hardware—everything that would need to be replaced if a disaster wiped out your entire company.
 This means not only computers (including the make, model, serial number, and internal components) but also cameras, printers, scanners, external drives, and other technology equipment such as phones, pagers, beepers, cell phones, copy machines, etc. Even non-electronic hardware should be recorded, such as paper punches, paper trimmers, and pencil sharpeners.
- Inventory all software, computer by computer. There are numerous programs online and on disk/CD that will automatically do this for you.
- Inventory all office furniture.
- Diagram your network structure and physical setup/layout (in case you have strangers or new employees putting it all back together again for you after the disaster has passed).
- Create and maintain a list of local vendors and out-of-town backup vendors, contact information for all of them, and agreements from vendor owners and/or vendor management to 24-hour response/service if a disaster strikes.
- Maintain several lists in several locations of everyone's user IDs and passwords (in case of tragedy or death). No one likes to "prepare" for death, but if a key person is lost, injured, or dies, the company must still function.
- Be sure everyone knows how to program their phone: to forward to other numbers, to change their voicemail messages, to retrieve their voicemail, and to conference, if necessary, with other employees.
- If using a local service provider, don't wait until disaster strikes to secure a secondary, backup service. Contract a separate service in another state and set up accounts for key personnel plus a second Web site. In addition, purchase and install a second "server" in another location/state and then mirror all data to the second location site. Regardless of whether you have a local service provider, maintain duplicate accounts in two different states on opposite sides of the country. Remember, the disaster can occur in their state (and/or multiple states, as happened with Hurricane Katrina) instead of yours, which means their service to you may be down or malfunctioning.
- Also, keep original Web site files on multiple computers and/or laptops so the Web site can be updated and maintained by several different individuals from multiple locations.
- Be sure to maintain bank accounts in several locations (in several states), as well, and provide purchasing authority plus an approval process to multiple backup personnel in case normal channels are unavailable.

With the Internet and a good T1 connection, companies can move data in minutes, so most companies have the ability to create multiple backup sites across the globe, says Mark Hodgen of StockPhotoSuite.com.

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How Prepared Are You For A Disaster?

Continued from Page 1 think they need to reassess how they're storing information and whether what they're keeping really needs to be stored."

To determine disaster preparedness, run through a few scenarios, even if it's informally, suggests Henry. Gather staff members from both IT and other relevant departments and take a hard look at what kind of data is being put into the system and what the effect would be if it were to be breached.

Henry says a common scenario is an unsecured HR database, which has all the information needed for identity theft of all employees. He suggests full volume encryption but also discussing how data is stored in different parts of the company. A crucial first step is knowing what needs to be recovered but also making sure sensitive information isn't being captured unnecessarily.

Find out, too, which business applications are especially needed. Every company has different requirements when it comes to frequently used software, so getting thoughts from other department heads is useful when putting a recovery plan together.

Also vital is to consider the loss of equipment. If the entire data center were to blow away tonight in a tornado, what would

happen? How quickly could a company get back up and running?

Who's On Speed Dial?

Once an enterprise is aware of the risks to the company's equipment and data, it's time to put together a phone list, says Henry. Although it might seem minor, he's seen companies lose valuable hours in the past because IT managers didn't have the home numbers of relevant executives or contact info for the company attorney. "Sometimes, in the case of something like a data breach, you have to make a decision right away about whether certain laws apply, so you need the number of the attorney," he says.

Emergency numbers should be given out to employees. Night security personnel should have the IT manager's home number in case of fire, theft, or other disaster. "Don't underestimate this aspect of disaster recovery planning," says Henry. "Lack of communication can cause significant delays, and as IT knows, every minute counts."

How Warm Are You?

When it comes to equipment, an SME should think in advance about what might make sense for recovery, says Hunter

Bennett, director of data center solutions at Ensynch (www.Processor.com/Ensynch), a provider of IT infrastructure services.

Companies can have a plan in place that ranges from creating a cold site, where an offsite location has an array of hardware that can be lit up if needed, to a hot site, where the cutover process is fairly automated and can be done in minutes.

Enterprises that use hot sites are usually those with the least amount of tolerance for downtime, says Bennett. Although this is the ideal for disaster preparedness, it's also the most expensive because it basically involves running two data centers simultaneously.

Many SMEs might opt instead for a warm site, where the equipment in another location is lit up and ready to go but still requires some manual intervention to replace a company's data center, notes Bennett. "With a warm site, you can be back up in a matter of hours, as long as you can get the IT team there to do it effectively," he says. "With a cold site, it can be a matter of days."

Another important part of the plan is setting regular intervals for testing the recovery procedures. (For more tips and information on such fire drills, see "Testing Your Disaster Recovery Plan" on page 10.)

Bennett suggests a step-by-step recovery manual. "Some companies feel like they don't have the money for a true disaster recovery solution, but it's not as expensive as they think to have core, critical procedures."

Determining Your Risk

Being prepared for a disaster involves assessing your enterprise's actual risk. Here are some factors to consider when determining what protections should be in place:

- Think about regional weather patterns and natural disasters: hurricanes along the Gulf Coast, droughts that tax electrical systems in the desert regions, tornadoes and blizzards in the Midwest, flooding in many parts of the country—every area has its particular nuances.
- Look at the company's history in terms of electrical outages and other resource allocation issues that external factors cause.
- Determine physical security levels: Could someone just walk into the data center and take a server?
- Examine power generation devices and test whether a long blackout of at least a few days would affect the company.

Changes Coming In Power Arena

Continued from Page 1

Alex North, director of business development for BayTech (www.Processor.com/BayTech), says the primary challenge for today's manager is determining the future requirements of power. "The demand has more than doubled in just the past four years. Another huge concern falls into what you do with the heat the power generates," he says.

North says the best approach is redundancy. "N+1 is no longer a wish; it's a requirement," he says. He recommends using a reputable engineering consultant to help design power infrastructure.

The Situation

"Power density is growing almost exponentially," says Mark Guymon, director of product management for power solutions at Leviton Power Solutions.

With Moore's Law, processing power doubles roughly every 24 months. "Greater processing power inevitably means more power consumption. Consequently, data center managers are concerned with simply getting enough power to support the wattage requirements of all of the computing, storage, and networking equipment found in the average data center cabinet," Guymon says. "In the past, the standard rack PDU was a 120-volt, 15- or 20-amp product." He, too, sees more 208V PDUs and higher amperage units, as well. Users also are looking at three-phase products to support larger kVA loads.

SMEs are meeting this need in a variety of ways. "We see a move towards higher voltage and higher amperage power," Guymon says. A standard 120-volt, 20-amp circuit can supply 1,920 volt-amps or watts (with rack PDUs volt amps or VA = watts), whereas a 208-volt, 30-amp circuit supplies 4,992VA of power.

"Geist Manufacturing is seeing more and more requests for high-power PDUs in the 10-plus kilowatt range," says Brad Wilson, Geist's chief technical director (www.Processor.com/GeistMfg). The company's ZP line has grown to include 35-, 40-, and 60-amp three-phase PDUs, with even higher units coming out soon.

"This demand is spurred by higher-demand blade servers," Wilson says. "As the cost per computation comes down, the power and cooling demands go up. Now that most cabinet manufacturers have resolved the high heat problems associated with 12-plus kilowatt loads, higher-power PDUs are in demand," he says.

North agrees it is futile to talk about power without discussing cooling. But SMEs also must think about power savings. "Implementing software that virtually moves applications to one under-utilized server can allow you to simply power down a server that you just made unused. I see companies that implement this strategy save up to 25% of power and cooling cost," he says.

Get Power Specs Right

"Without measurement, a data center manager is flying blind," North says. "Understanding all the way to the rack level what is going on with the power is the first major commitment any design should implement."

Macomber says that many SMEs do not have an adequate panel board. "A typical SME might need a 30-amp power strip today. At \$1,000 per power strip, the boss will not be giving you the budget to replace them in 12 months," Macomber says. "It's not just the cost of the PDU but also the cost of installation, downtime, the UPS."

He continues, "There is simply a lot of wrong information out there. My observation is that, when I review the specs for a 2,000- to 4,000-square-foot facility, 80% of the time they have the power spec wrong."

Macomber blames a lot of the problems on marketing. "People buy on the basis of marketing sales pitches, not engineering," he says. His solution is for engineers to take a more consultative approach.

"Many companies look at power second to technology or functionality," he says. "But it's all about the power."

Aphel focuses on high-density installations. Macomber puts the blame for SMEs' current problems squarely on the server manufacturers. "It's getting more complex at an increased rate of speed," he says. He doubts those who designed the blade server gave much thought to powering them.

Where To Start

Start with taking a census of your equipment. "Look at the age of the equipment and the amount of old vs. new equipment," Macomber says. "Next, look at the size of the equipment. Lastly, see how full the enclosure is—how much equipment is there."

As equipment gets bigger, so do power and space requirements. The typical SME might have a small, 3 or 4kVA UPS. The power package in an average enclosure is 6,000 to 7,000 watts.

Wilson says he now sees use of automatic transfer switches on blade servers to provide N+1 redundancy to the redundant power supplies on blade servers. "This helps curb overall installation costs while maintaining redundancy required for hightier data centers," he says. Geist will introduce the first fully digital transfer switch in

mid 2007, delivering switching times between five and 12 milliseconds.

One challenge of estimating equipment load is differentiating between "name plate" power and actual power, Guymon says. "Most equipment will list wattage or amperage on the nameplate, giving the maximum power that it could draw based on the max capability of the internal power supplies. In reality, most equipment will draw around 50% of the nameplate rating," he says.

"To size the power infrastructure effectively, it is important to have a clear understanding of your actual load rather than the assumed or nameplate power load. If this is not clearly understood, then the result could be an oversizing or undersizing of your power infrastructure," Guymon says.

"I've seen a lot of implementations fail simply because the homework on vendor selection was not done," North says, adding that SMEs can learn a lot by being part of professional organizations such as 7x24 Exchange International or AFCOM.

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Where will power needs end? Many consultants, only half jesting, tell clients looking at power needs to double their estimated power requirements and add 10%, and then they may

Double Your Estimate

be set for the future. While Kevin Macomber, vice president for the Americas at Aphel Technologies (www.Processor.com/Aphel-Technologies), might not go that far, he is one who buys that general concept. When working with data center managers, the first thing he does is critique where they are today and then look at where they will be in 12 to 18 months.

Mark Guymon, director of product management for power solutions at Leviton Power Solutions (www.Processor.com/Leviton), also agrees that some enterprises would benefit from installing double current requirements to provide for future

capability. "But each data center and environment is significantly different," he notes. "At a minimum, design in the infrastructure elements that are most difficult to add later on, particularly floor space and space under the access floor or overhead space for running cables."

Today's organization is under pressure not only to provide the needed IT capabilities but to also do this within a limited budget. Given the oftenchanging strategic environment within most enterprises, flexibility is critical.

"After considering all of these factors, most organizations will design a certain amount of overhead into their infrastructure, but it would be the exception rather than the rule to design in double the capacity that is currently needed," Guymon notes.



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- -24X250GB htswap SATA-II Drives installed.
- -24 port SATA-II RAID. CARD/BBU.
- -2X10/100/1000 LAN onboard.
- -930W Red PS.

Custom OEM Solution

- -Custom chassis design per your needs for your appliances.
- -Custom logo printing.
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- -Custom installation of your images.
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Technical Expertise

We have a highly qualified technical and engineering team consisting of Redhat, BSD, MCSE, CCNA and CNE certified engineers. They are dedicated to address any questions you may have with our hardware products. Our sales engineers are experts in providing you solutions that suit your needs while keeping your budget low.

8U Dempsey/Woodcrest Storage server Stand at-\$11,771

- -10TB Storage installed. Max-30TB.
- -Intel Dual core 5050 CPU.
- -Quantity 42 installed.
- -1GB 667MGZ FBDIMMs.
- -Supports 32GB FBDIMM.
- -40X250GB htswap SATA-II Drives installed.
- -2X12 Port SATA-II Multilane RAID controller.
- -1X16 Port SATA-II Multilane RAID controller.
- -2X10/100/1000 LAN onboard.
- -1300W Red PS.



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Power Protection

■ Para Systems released its Minuteman EnSpire Standby UPS series, a new UPS line that includes the EN400 (rated at 400VA/300W) and EN600 (rated at 600VA/ 300W). Backup times for both units are two minutes at full load and 10 minutes at half load. Both units have six outlets, of which three provide battery support and spike and surge protection. Three outlets provide spike and surge protection only. Additionally, two outlets are spaced to specifically support transformer blocks. Para designed the models with outlets on the top, and the units are also small enough to insert on or under a desk or table or wall-mount. Prices run between \$59 and \$75.

Racks & Furniture

■ Elma Electronic is targeting its new 19-inch front panel frames at applications that don't specify requirements for complete card frames. The 19-inch front panel frames help users build up displays, interfaces, patch fields, and other front panel structures. Elma is targeting the 19-inch front panel frames at such markets as building automation, security, telecom, and control cabinets for machine tools. Customers can take advantage of Elma's ability to custom-design the product to meet their needs. Elma can create sharp corners and precise cuts and also offers painting and silk-screening services.

COMMUNICATIONS

Security

■ Guardium announced the Guardium DBLP, an appliance for database leak pre-

vention that automatically locates and classifies sensitive information in corporate databases. The Guardium DBLP prevents unauthorized use based on real-time policies and continuous comparisons to normal activity. The appliance identifies suspicious actions by monitoring traffic both to and from database servers. It then uses a database crawler to look for patterns, such as 16-digit credit card numbers and nine-digit Social Security numbers. The appliance will also generate alerts when it locates sensitive data for the first time. Guardium DBLP tags sensitive objects with metadata classifications to ensure that appropriate access policies and audit processes are applied to the tagged items. The system automatically assigns customizable, highly granular access policies to control what groups have access to data and at what times.

Telephony

■ TalkSwitch announced additional IP extensions for all TalkSwitch VS, 48-CA, and 48-CVA systems, providing customers with an easy, economical system expansion. With the purchase of IP extension blocks, customers can double the capacity of every TalkSwitch system in their network. TalkSwitch systems can now serve the needs of businesses with up to 64 phone users per location. In addition, customers using VS systems now have the option of expanding voicemail capacity by one or two hours without a memory card. Additional IP extensions cost \$499 per block of eight extensions.

END NODES

Printer

■ HellermannTyton has released the TT1220 thermal transfer printer, which is

ideal for medium- to high-volume batches of thermal transfer labels. The TT1220 offers a side-loading option for simpler loading of labels and ribbons. All HellermannTyton thermal transfer labels sizes, including ShrinkTrak and TipTags, are compatible with the TT1220. This printer has a resolution of 203dpi, prints at a rate of 6ips, has a 32-bit processor, and also has 4MB flash and 8MB DRAM. The TT1220 has an LCD control panel, self-diagnostic tools, and E3 technology. It also includes USB, parallel, and serial ports.

Storage

Teralyte, a removable, disk-based backup system for SMEs. This product can connect to a company's servers or to a backup server. Teralyte is compatible with all SATA I and SATA II disks currently available, and it provides up to 750GB per disk. Idealstor includes its iBac 4.0 data-protection and backup software with the Teralyte. Two configurations are available, the Teralyte 1000 with a single removable drive bay for \$1,995 and the Teralyte 2000 with two drive bays for \$2,995. Extra caddies and cases are available separately.

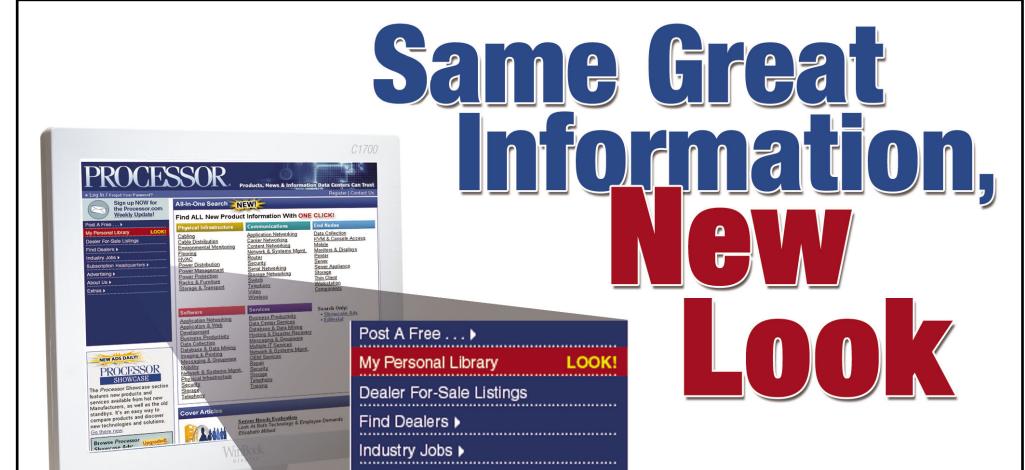
Imation added storage capacity of up to 8GB to its USB flash drives. The drives include units from the Imation Swivel Pro Flash Drive, Imation Swivel Flash Drive, Imation Clip Flash Drive, and Imation Pivot Flash Drive families. The Imation Swivel Pro Flash Drive has a protective, never-lose swivel cap, and the Imation Swivel Flash Drive features a lightweight design; both drives have downloadable software for drive partitioning and password protection. A small USB flash drive,

the Imation Clip Flash Drive has a durable, rubberized shell. Finally, the Imation Pivot Flash Drive features 256-bit AES encryption. The Imation Swivel Pro Flash Drive with 8GB of capacity will be available this month, and the 8GB Imation Swivel Flash Drive will be available next month. The other drives will be available later this year.

■ LSI released 2G MegaRAID ROC SAS adapters, which let companies create single-platform SAS infrastructures that incorporate SATA drives and SAS drives. These MegaRAID ROC SAS adapters also support RAID 6 for more reliable and secure storage of company data. With RAID 6, two drives may simultaneously fail without losing data. The new LSI adapters are based on LSI's SAS1078 controller IC, which has a PCI Express host interface for fewer bottlenecks. It also supports 1.5GBps sustained sequential throughput. The new adapters include the MegaRAID SAS 8708ELP, MegaRAID SAS 8704ELP, and MegaRAID SAS 8888ELP. Finally, the new adapters incorporate 667MHz cache.

■ Nexsan has teamed up with Reldata on a new unified IP SAN/NAS storage system. The new system combines a Nexsan SATABeast with a RELDATA 9240 IP Storage Gateway. It can replicate SAN-level data over WANs and incorporates dual 4Gbps Fibre Channel ports, six 1GbE ports, and two Ultra SCSI ports. Meanwhile, the AutoMAID (Massive Array of Idle Disks) function in the SATABeast allows a power-conserving state for hard drives without inordinately slowing down data accesses.

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Continued from Page 16

- SMC released the TigerStore SMB NAS Storage Server, a high-performance storage solution for SMEs. The new SMCNAS04 (\$599.99) provides four empty SATA slots, which can hold up to 3TB, and the new SMCNAS24 (\$999.99) comes preconfigured with four 250GB drives for 1TB. The products feature a Web-based UI and support for RAID 0, 1, 4, and 5. Support for JBOD and BIG will be future options.
- Xyratex is targeting near-line storage markets with its new F5404E 4Gb FC-SAS/SATA RAID system. The ultra-highdensity near-line storage system will be helpful to midrange storage users who need enterprise-class features. Key features include a fault-tolerant architecture, a design that has no single point of failure, and two RAID controllers per chassis, as well as four 4Gbps Fibre Channel host connections. It offers 3G SAS connectivity and RAID 6, as well as Snapshot. The 4U system offers up to 36TB of storage and boasts low power consumption. In fact, according to Xyratex, it offers 50% more TB/KW than other near-line storage RAID systems on the market.

Components

■ Acrosser Technology released the AR-B1842, which is a PICMG 1.3 PCI-E halfsized CPU card targeted at digital display broadcast systems, gaming, and POI environments. The AR-B1842 supports Intel Pentium-M processors with FSBs at 533 or 400MHz, as well as up to 1GB of DDR2 memory. The card has an integrated Intel GMA (Graphics Media Accelerator) VGA controller, which lets it handle dual displays via VGA, LCD, and TV. The AR-

B1842 also has two serial ports, two SATA ports, four USB 2.0 ports, an IDE connector, a mini PCI slot, and a 10/100 Ethernet port. It also has a socket for CF (compact flash) cards. The card offers full-duplex sound, thanks to an AC'97 codec. It also offers PCI-E x8 Gold Finger and has a software-programmable Watchdog feature. The AR-B1842 is RoHS compliant.

SOFTWARE

Database & Data Mining

■ Netezza announced a partnership with AdventNet to help customers migrate their Oracle data warehouses to the NPS (Netezza Performance Server) system. Netezza's NPS system is built to analyze terabytes of detailed data, as well as store, filter, and process terabytes of records within a single unit. The AdventNet SwisSQL Console conversion tool enables users to convert Oracle SQL to the Netezza data warehouse appliance. The SwisSQL Console conversion tool is available at the AdventNet Web site.

Business Productivity

■ BMC Software released the BMC SRM (Service Request Management) solution, which is designed to help medium-sized and large businesses make more efficient use of their service desk and support staff. The BMC SRM features back-office fulfillment, integrated self-service functionality, native integration with BMC's Business Service Management platform, and incident prioritizing capabilities. SRM delivers a central interface where end users can view the service catalog, read its descriptive entries, and submit the appropriate service request. The software also lets administrators automate service delivery operations to improve overall service consistency and lets them track and supervise service requests from the initial stages through to the final resolution.

Network & **Systems Management**

- CA introduced its Workload Automation Solution, which lets IT administrators in medium-sized and large IT organizations manage business process performance across distributed, heterogeneous, and mainframe environments in real time. Features include policy-based workload prioritization, automatic workload triggers embedded into existing processes, graphical representations of end-to-end production workflows, and automatic exception notifications, which can help IT staff manage workflows and maintain system-wide availability across diverse infrastructures. Components of the CA Workload Automation Solution include CA Workload Control Center, CA AutoSys Workload Automation r11, CA ESP Workload Automation r5.5, CA-7 Workload Automation r11, and CA dSeries Workload Automation.
- Citrix Systems announced Citrix NetScaler 8.0 to provide application delivery software that can reach users on multiple devices or in any location. NetScaler 8.0 uses the AppExpert Policy Framework to provide a standard for controlling application- and user-specific policies. It also features AppExpert Visual Policy Builder to make those policies easier to configure, and version 8.0 includes capabilities for graphical policy configuration. Netscaler

8.0 features a fully integrated SSL VPN to provide application access security, a Web application firewall for application and data protection, and end-user experience monitoring to measure application performance. Version 8 features enhancements for load balancing based upon origin server SNMP MIBs, support for IBM Server Application State Protocol, advanced DNS functionality, and additional TCP optimizations.

Citrix also announced Citrix Desktop Server 1.0 to provide virtual desktop software that allows organizations to deliver and manage desktops. Desktop Server 1.0 delivers Windows desktops from the data center as a secure on-demand service. The software also supports many methods for installing desktop operating systems in the data center, including virtual machine environments, blade PCs, and Windows Terminal Services. Desktop Server also provides the benefits of a centralized desktop computing model that lets users run their desktops with the power, control, and personalization they expect.

■ Marathon announced everRun, software that prevents Windows applications from shutting down during updates and upgrades. With Marathon everRun, companies can reduce downtime during planned upgrades. everRun now includes Dynamic Upgrade technology, which doesn't require any special proprietary hardware. While one server is upgraded and tested, the other server ensures that applications continue running. Marathon's everRun FT currently includes Dynamic Upgrade, and it will also be available on everRun HA sometime this quarter.

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DATA CENTER SERVICES

APRIL 6, 2007

Turn Old Equipment **Into Cash**

Horizon Datacom Solutions Helps Businesses Make The Most Of Their Network Hardware Investments

HORIZON DATACOM SOLUTIONS, located in Columbus, Ohio, has one specific goal: helping businesses make the most of their network hardware investment. Many businesses are faced with growing (sometimes painfully high) capital budgets, and yet they have literally stacks of switches, routers, wireless gear, and other network hardware that they have outgrown, no longer need, or don't have room for. Some businesses find that they have racks filled with decommissioned hardware, or that due to expansion or changing needs, they don't have the right equipment.

In the past, the hardware would simply sit in a spare room or corner until it was eventually hauled away and disposed of in a mass "asset recovery" that took CRT monitors, desktop computers, printers, and other e-waste and hauled it away. But this no longer has to be the case.

Horizon Datacom Solutions specializes in refurbishing network hardware and can help you recover value out of what you have. Plus, selling your equipment to us helps keep it out of a landfill, helping contribute to your corporate "green" initiatives.

Get Value From Used Equipment

Horizon Datacom helps businesses and organizations get value back from their used equipment. Stated simply: We turn old network equipment into cash.

We are committed to refurbishing and putting that same equipment we purchase back into useful life, which provides additional value to our customers who both save money purchasing from us and get

Equipment Purchased

We buy large or small quantities of network LAN/WAN, wireless, and VoIP equipment. Or you can use it as credit to update your current infrastructure.

We buy:

- Alteon
- Foundry Networks
- Cisco
- HP Polycom Enterasys
- Extreme Networks SonicWall

If you have surplus equipment, please note quantities, description, condition, and any other notes where possible.

If you frequently upgrade your equipment or have large quantities to dispose of, let us design an asset management plan for you. We can help you increase both cash flow and return on assets by faxing or emailing your list of surplus equipment.

reliable hardware, backed by our guarantee and hard-won reputation for quality and customer service.

At Horizon Datacom Solutions, refurbishing involves much more than blowing the dust off of circuit boards. Horizon Datacom maintains a full testing lab where every piece of equipment is rigorously tested and repaired if necessary. We repaint the chassis, replace missing or broken parts, and carefully repackage the finished product. In fact, many of our customers claim the hardware they purchase from us is virtually indistinguishable from new hardware.

Horizon also offers refurbishing services for companies that want to redeploy their own gear. You simply send it in, have it tested and refurbished, then it's sent back to you, ready to deploy at new locations or for new uses.

Real-Time Inventory

Some businesses are leery about buying from the "refurb" market—some with good reasons. eBay can be a crapshoot: You may be dealing with a guy operating out of his garage, or worse, finding yourself buying counterfeit gear.

Horizon Datacom has been in business for more than 10 years. And, in 2003, we were recognized as one of the Inc 500 fastest growing businesses in America.

Businesses worldwide purchase refurbished networking equipment from Horizon Datacom.

Horizon maintains a complete, real-time inventory listing on its Web site at www .horizondatacom.com. While some companies may say, "I can get that for you," when you use Horizon Datacom's online store, you can be assured that what you see online is on the shelf and ready to be shipped to you. In fact, most orders are packed and shipped the same day. And right now we're offering free FedEx ground shipping on most orders of \$100 or more within the continental United States.

Repeat Customers

Vicky Nosbisch, owner and president of Horizon Datacom Solutions, says, "I'm proud of the fact that most of our customers are repeat customers. Few things give me greater pleasure than buying network gear from a customer, seeing it arrive at our loading dock, then coming back to life in our test labs, ready to find a new home with a new customer."

And Vicky has a challenge: "Send me a list of your unused network gear. We'll show you how much it's worth, make you an offer, and help you find the network hardware you need."

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Continued from Page 17

■ NetScout Systems announced upgrades to its nGenius AFM (Application Fabric Monitor) 4.0 and nGenius PM Storage (Performance Manager) 4.0 products. New features include the tight integration between these products, which lets network managers seamlessly navigate between flow data and packet data within one session and from one login. The products' architecture collects packets and application flow data from across a distributed enterprise, focusing access back to a management console within nGenius Performance Manager. Additionally, the company says nGenius AFM is now available in 2, 4, and 8TB configurations. Other new functionality includes FIX protocol support, improved nGenius Solution for NetFlow and IP SLA, and MTTR enhancement.

■ There's new HBA (Host Bus Adapter) virtualization support in software from Novell, QLogic says. The software company is the first to support QLogic's new N-Port ID Virtualization technology for Linux with its ZENworks Orchestrator and Virtual Machine Management for SuSE Linux Enterprise Server. Novell's support for NPIV (N-Port ID Virtualization) is an apparent quid pro quo for QLogic's participation in the early adopter program for the two applications. The software works with QLogic's SANblade 2400 Series 4Gbps Fibre Channel HBAs.

■ Opsware launched an updated version of its Server Automation software, which consists of Opsware's Server Automation System and iConclude's process automation software. The offering is fully ITIL (Information Technology Infrastructure Library)-compliant (a framework of best practice designed to assist administrators in providing superior IT services) and capable of both change and process automation. The Opsware Server Automation platform can ensure that the testing, staging, and production environments remain in sync throughout development and that the rollout of the finished application is uniform across both local and distributed systems and groups. The Server Automation software also includes an easy-to-use graphical user interface for unifying disparate task, user, and system interactions.

■ RadView Software released its new commercial-grade, open-source Internet performance testing software, WebLOAD Open Source. The software is licensed under the GPL 2 and is based on WebLOAD. Web-LOAD itself is deployed at 1,600 sites. Radview is banking on WebLOAD's Open Source fostering innovation. The software is available free, but customers who want commercial support or productivity features can purchase WebLOAD Professional. Customers can download the free version immediately as an alternative to proprietary performance testing software. RadView plans to focus on open-source products.

■ Shunra has announced the release of its VE SMB Edition, a software version of the company's enterprise-scale Shunra VE hardware solution. The SMB version simulates a point-to-point network link that lets users test the performance of business applications in existing or projected network conditions, all without testing over a local WAN. The company says SMB Edition lets users see how applications perform at remote and local desktops to find and fix problems and detect

network capacity requirements before rollout into production. The SMB Edition doesn't require any ramp up or training, Shunra says, and it can be installed on a client, server, or dual-NIC PC to perform as a router-based WAN simulator. Additionally, SMB Edition includes VE Network Catcher technology, which captures and replays production network conditions. This lets users re-create a network environment that's as real as possible. A free trial is available.

Security

■ CyberScrub released CyberScrub Compliance Suite. The software suite is targeted at businesses that seek to comply with federal and state laws and statutes, such as Sarbanes-Oxley, HIPAA, FACTA, and Gramm-Leach-Bliley. The software offers complete, secure, specific destruction of data targets over networks. The software, which lets administrators control from a single management console, uses a task-based methodology to find and destroy data targets. The CyberScrub Compliance Suite supports filters and masks and can perform tasks automatically (or manually). The software provides log file reports and lets administrators create custom erasure targets. It can destroy Internet activity evidence, purge Windows traces (including Thumbs.db, Registry entries, memory dumps, MRUs, and others), and can destroy application-generated data, such as IM data. The software's data deletion methods exceed DoD requirements, and the software itself is auditable. Administrators can select target data based on file extension, age, location, or event.

■ Lieberman Software has announced User Manager Pro Suite, a security-management suite which offers security, systems management, password policy, and reporting tools in a single package. The suite now includes Random Password Generator, Password Recovery Console, NTFS Permissions Reporting, and Web Reporting software. User Manager Pro Suite is designed for Microsoft environments. With User Manager Pro Suite, administrators can alter groups, users, Registries, policies, audit settings, and permissions. The software also offers real-time reports and is compatible with Windows Vista.

■ New software from **Promisec** offers broader support for Windows Vista and enhanced, agentless endpoint security management features. The company says that Promisec Spectator Professional now monitors antivirus software for out-of-date definitions and can automatically repair the installation when it's been uninstalled or is otherwise down. Spectator also can maintain a record of unauthorized software on an end-user system even if it's been uninstalled.

■ StillSecure announced details of its Cobia unified network platform, which it says delivers critical network and security features via a flexible software delivery platform. The Cobia platform is designed for SME and enterprise remote offices and runs on compatible Intel and AMD hardware. StillSecure says it developed Cobia as an alternative to traditional fixed-appliance approaches for deploying network infrastructure and services. Network and security modules in Cobia include dynamic/static routing; a firewall; and DHCP, IPS, Wi-Fi, VPN, with other services to come soon. StillSecure says Cobia can be installed on off-the-shelf X86 hardware or as a virtual

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Storage

■ Emulex announced the VMPilot, a management application for Microsoft Virtual Server 2005 environments. VMPilot works with Emulex LightPulse 4Gbps HBAs to simplify the creation and migration of Microsoft Virtual Server-based virtual machines attaching to SANs. VMPilot can also migrate virtual machines to alternate physical servers while maintaining SAN attachment. VMPilot provides a unique virtualized HBA connection based on industrystandard NPIV. A wizard creates virtual machines with SAN connectivity using virtual HBA ports that work like physical HBAs. This makes it possible for administrators to maintain all the benefits of SAN-based storage, including the use of standard SAN management tools and best practices such as fabric zoning at the virtual machine level.

■ PAC Software announced Folderscape, a systems management tool designed for NetApp's family of storage systems. Folderscape lets users create, configure, and resize aggregates, volumes, and LUNs (Logical Unit Numbers). System administrators can also use Folderscape to perform routine maintenance on Snapshot copies, quotas, users, groups, qtrees, folders, and files. The application also displays files in different colors when they are also in Snapshot copies, which lets users know what aspects have changed. To restore the files, users need only right-click them. Folderscape also includes an intuitive graphical user interface that Windows users should easily recognize. A 60-day trial is available.

Telephony

■ Fluke Networks released Visual UpTime Select 2.5, part of its family of Enterprise Performance Management solutions. This latest version has several new capabilities, including the ability to monitor call quality on a segment-by-segment basis and compile data through flexible reporting capabilities. When used with ASEs (Analysis Service Elements), Visual UpTime can gather data on every segment of a VoIP call providing detail about call quality. This allows the network manager to identify and correct problems before customers notice a decline in call quality. New reporting capabilities include a collection of 75 flexible reports that can show a range of information. UpTime reporting offers editable grouping, scheduling, and delivery options from its Web Client.

SERVICES

Hosting & Disaster Recovery

■ Arsenal Digital launched ViaRemote RapidProtect and ViaRemote RapidRecover, two data protection services for remote servers that are designed for SMEs and SOHOs. ViaRemote RapidProtect is a service that uses a temporary onsite appliance and Arsenal professional services to help achieve key data availability and service levels. ViaRemote RapidRecover is a service that utilizes an onsite appliance and Arsenal professional services to recover data from individual servers or entire sites. Data can be restored at the original office location or at a separate disaster recovery site. A ViaRemote bare-metal restore option is also available to customers for complete system/server reconstruction.

Affordable Hybrid NAS & iSCSI

StorBank-XL Offers Extensive Feature Set In A Reliable, Scalable Package

TODAY'S SMALL TO MIDSIZED enterprises need a versatile storage platform that com-

bines simplicity, advanced functionality, and scalability in a high performance, highly reliable package. DNF Storage's Stor-Bank-XL product family meets these needs by providing an innovative hybrid of NAS and iSCSI (File and Block modes) in one intuitive system.

The StorBank-XL is ideal for disaster recovery or disk-to-disk backup. Because the StorBank-XL supports both NAS and iSCSI, multiple applications can take advantage of the same storage

pool whether users are sharing files via NAS or an individual application's iSCSI volumes. The StorBank-XL offers a central platform to manage all storage requirements across the entire organization. Installation and setup are simple: any StorBank-XL configuration can be up and running in about 15 minutes.

The StorBank-XL uses SATA technology to provide storage capacities ranging from 500GB to 12TB. High-performance features include one or two dual-core storage processors, up to 12GB RAM, dual Gigabit Ethernet connections, and software RAID or efficient hardware RAID.

Immediate backup and restore. Stor-Bank-XL's Snapshot function offers flexible scheduled snapshots for data

protection, system tests, and nearline disaster recovery.

> Volume and file replication. Stor-Bank-XL replication lets users create a copy of any file and volume or share and keep two identical copies on the network. The iSCSI target replicates data in real time.

APRIL 13, 2007

Easy storage management. Management of all advanced features is easy and convenient with unified task manager. From a central admin page, an administrator can schedule replication, backup, and snapshots. A Webbased, password-protected

GUI means the StorBank-XL can be easily managed from anywhere within the network, making remote management simple.

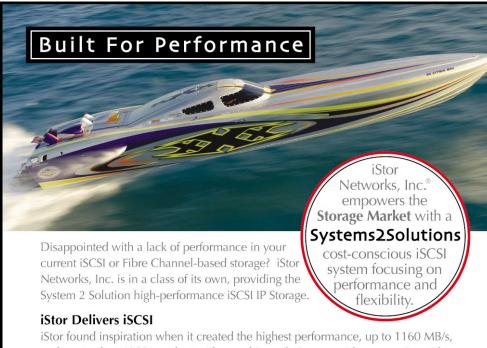


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and most robust iSCSI products. The resulting solutions provide companies with the ability to overcome technology and total cost of ownership limitations in DAS, SAN, and NAS environments.



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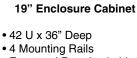
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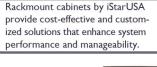


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OPINIONS

INFO-TECH • INSIGH

I'd Like To Exchange Exchange, Please

The great DST (daylight saving time) software update of 2007 is over. In the post-mortem, it turns out that the patching wasn't much of an issue: It was the crisis around rebasing Exchange calendars.

Expectations Exchanged

IT expends vast resources on managed storage, disaster recovery plans, and business continuity plans to preserve, secure, and serve the business's data. The business expects IT to serve the data like it was when the business left it in IT's care. But for DST 2007, the global market leader in corporate email server software required admins to break the business user's data, hand it back to the user, and ask the user to manually fix it.

Exchange Server 2003 admins expected to read a few instructions, follow a few simple steps, and be done with adjusting calendars to take into account a trivial change of two dates. Instead, they found dozens of pages of instructions spanning multiple articles that discussed complex situations and contingencies, even offering pages of scripting code in case all else failed.

One Microsoft Knowledge Base article advised a certain order of steps; another article reversed the order; and in a third, both were detailed, and readers were advised to choose based on how "heavily" the enterprise used Outlook Web Access (whatever that means).

Various Microsoft articles and Webcasts told system admins that there was no way to be sure Microsoft's own tools would accurately rebase all items. Microsoft instructed IT to advise users to insert dates and times into the text of appointment invitations and to print off calendars before running rebasing tools to facilitate manual verification. Then Microsoft revised that KB article, and the guidance disappeared, leaving Exchange admins to hunt for external

admins to hunt for external guidance on how to prepare their users for the shift.

What's An Admin To Do?

Whilst shaking their heads at Microsoft's uncertainty toward its own solutions, perhaps admins ran one of the calendar rebasing tools. They discovered they couldn't run the Exchange tool from an Exchange admin account or one in which the Exchange System Management plug-in

resided. What? The administrator can't run the tool?

Administrators found a handy switch for the Outlook tool that would update only those appointments made in the target time period before the OS patch was applied but learned it wouldn't work with another handy switch to suppress the resulting update confirmations that would swamp the system and confuse users. Alas, the tool failed to adjust resource calendars and public folders.

What to do? If admins ran the tool again, they watched single-instance appointments knocked further out of whack. Scratching their heads, they went back to the beginning.

Are the patches properly installed? They called support, wasted more time poring over documentation, and vented increasing frustration in online forums.

Less than a month before the DST switch, Microsoft released a hotfix for the Outlook tool that "improved functionality."

VINCE LONDINI

Vince Londini is a research analyst at Info-Tech Research Group. Londini has more than 16 years experience as a public speaker and an IT implementer in nonprofit environments. The focus of Londini's current analytical work is on data center practices in small enterprise environments.



Permissions errors still confused admins, who wondered why changing two measly dates broke their BlackBerry or Good Mobile connectivity, placing IT squarely in the gun-sights of their corporate executives.

Finally, IT resigned itself to instructing users to manually adjust inaccurate calendar entries. Calls poured in to consultants from admins whose jobs were on the line over this very visible mess. The unlucky ones restored BlackBerry connectivity in one branch office but none in the others, despite having followed the same process on identical infrastructures in each location. These lost souls probably still don't know what to do.

Exchanging Places

In this manually intensive aftermath, I think we learned three lessons:

Adjustments to the end user's softwaregenerated data must occur via software means that do not require end users to manually re-create their data. The Exchange DST migration should have been a seamless, hidden, automatic adjustment. Dial the telephone. Send an email. Tell your ven-

dors exactly what you thought of their DST update processes.

End users are increasingly removed from the true complexity of IT systems. While user-friendly GUIs, single-pane-of-glass management, and process automation all greatly empower users to do their jobs, the unintended side effect is a high level of end user expectation. Vendors that do not deliver will incur increasing damage-control costs.

Small and midsized enterprises cannot afford to "skip the test phase." With the availability of inexpensive virtual machine software, there is little excuse. Too many shops left themselves with one chance to get it right and then caught a glimpse of the documentation. By then, it was too late.

Now that the confusion is sorted out and the furor has died down, IT shops aren't likely to exchange Exchange for some other solution. But I'm sure they were tempted. Vendors can only hope the U.S. Congress doesn't rescind the DST change next year.

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Remote Data At Risk

How To Defend Data In Remote Office Environments

by Christian Perry

ENTERPRISES FUNNEL LOADS OF TIME, money, and energy into the process of protecting in-house data, and for good reason—the existing threats to data are numerous. Yet the moment an enterprise situates employees outside those walls, the rules of protection change because processes for securing in-house data don't always apply to remote office locations.

"About 60% of all corporate data is in remote offices and out of the IT department's control," says Tom Mackowski, vice president of digital product management for Iron Mountain (www.Processor.com/IronMtn). "Remote office data, also known as 'distributed data,' lives at the edge of the network on remote servers and PCs—typically outside the layers of traditional security afforded to a data center."

In many cases, that remote office data is no less important than in-house data because enterprises must distribute reports, statistics, and other information to remote workers in order to facilitate an effective communication pipeline. Further, these employees typically have unfettered access to in-house data, which means that any breach of that connection could spell doom for enterprise security.

Challenges Ahead

According to Scott Ksander, chief information security officer and executive director of network services for Purdue University, there are three basic problems with remote office technical configurations. The first issue deals with the path leading from the main office to the remote office.

"Economic requirements often drive this to some sort of 'commodity Internet

access' rather than a dedicated path," Ksander says. "If those economic requirements exist, a fully encrypted virtual private network is still a must. Without this, data is at risk as it moves."

The second problem, Ksander says, is determining a method for providing effective IT support for the remote office. Enterprises might discover that support requirements in the main office can be difficult to maintain in the remote office, and if those requirements aren't fully implemented or understood, data will be at risk as it rests.

"The final element of protection is physical protection. Server rooms, office environments, and wiring closets may be less secure in a remote location using leased space designed for general office environments and not IT machine space or secure IT storage," he says.

Dave Elliot, vice president of worldwide marketing for Arkeia Software (www .Processor.com/ArkeiaSoftware), explains that remote offices tend to create what he calls the "elephant through the garden hose dilemma," in which huge data growth at the edge of the enterprise—along with the emerging requirements to protect that data—presents challenges for companies looking to move large amounts of data across a limited network.

Protection Plan

Naturally, there are basic, no-brainer options, such as fully encrypted VPNs, available to enterprises looking to secure remote office data, but other methods can also contribute to an end-to-end protected remote environment.

"Centrally administered software support [from the main office], while expensive on the surface, can save money in the long run on support and reduce the risk of weak or misconfigured remote computing equipment," Ksander says. "There are many products from various vendors, as well as products native to operating systems (such as Microsoft's SMS), that provide central administration."

Because any locally installed software can introduce risk, Ksander recommends that enterprises keep operating system and applications software patched to current levels. Further, they should utilize antivirus and antispyware products and software- or hardware-based firewalls (or both).

To avoid the risk of PC and laptop data falling into the wrong hands, Mackowski says that enterprises should consider encrypting sensitive data, but they can also choose the less burdensome method of implementing more active technologies that monitor for abnormal or threatening behavior and destroy sensitive data before unauthorized parties can access it. He also stresses the need for centrally managed online backup, which takes the responsibility away from the employees and gives it back to the IT administrators, and using online backup to secure data on distributed servers.

"There are a number of products and services available on the market for protecting data, but the key factor is ease of use without sacrificing the important enterprise features that are required," says Josh Coates, founder and CEO of Berkeley Data Systems (www .berkeleydata.com). "Remote backup is by far the safest and cleanest method for dealing with remote offices, especially if the service has a simple, centralized method for configuration and monitoring."

When selecting an online backup service, Coates suggests that IT managers carefully consider encryption features. For example, remote backup becomes far safer when companies use private encryption keys unknown to the backup vendors. "Private encryption prevents anyone—from a disgruntled employee to [Vice President] Dick Cheney—from snooping around in confidential corporate data," Coates says.

System Surety

Companies should also work to ensure the systems holding their remote data are in good condition and can withstand potential disaster. According to David Weiss, CEO of Dataprobe (www.dataprobe.com), fault tolerance and redundancies can be built into most systems and processes, and standard techniques such as RAID arrays, highavailability clustering, hot sites, and protection switching can be deployed to provide alternate resources.

"The protection and uptime of remote systems is not just important for an organization; it is absolutely critical for business continuity and long-term success," Weiss says. "In today's fiercely competitive market and fast-moving economy, it can mean the difference between success and failure for a company."

Remote data protection is no small feat, and Arkeia Software's Elliott warns these endeavors can entail plenty of costs beyond just time and effort: "IT managers must take into account the entire cost of new architectures, including the learning curve and the ongoing management of the solutions."

Nonetheless, by considering all angles and deploying the necessary technologies, enterprises can certainly enjoy the benefits of remote office production without worrying about the potential demise of their data.

Protection Checklists

Enterprises should construct a detailed plan for protecting data in remote offices, and Purdue University's Scott Ksander and Berkeley Data Systems' Josh Coates provide technology checklists to help them begin the process.

Ksander

- VPN
- Firewall (hardware, software, or both)
- Fully current operating systems with periodic patching
- Fully current application software with periodic patching
- Antivirus software with regular virus definition updates
- Antispyware software with regular spyware definition updates

Coates

- · Secure, remote backup service
- Private-key encryption
- · Open-file support
- Centralized configuration management
- · File versioning
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Getting Employees On Board

Getting the technologies in place to protect remote office data is one thing, but getting employees onboard with the new security efforts is an altogether different beast. However, this process is far from impossible, and Iron Mountain's (www.Processor.com/IronMtn) Tom Mackowski says that automation and training are key to success.

"If there are opportunities to automate a process, it's in your best interest to do so," Mackowski says. "However, you're not going to be able to do that for all processes—that's part of the challenge. For processes that are not centrally managed or automated, hold management training sessions so everyone understands their specific role and its importance to the company."

Purdue University's Scott Ksander agrees and adds that policy is similarly integral. "Provide professional development for remote office IT staff if central IT maintenance is not available or funded," he says. "Have clear, effective policies that specify remote policies, procedure, and best practices."

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April 20, 2007

Reverse Logistics

IT Asset Recovery Services

by Kurt Marko

A MAJOR TASK in any IT department is the specification, evaluation, and installation of new equipment. From PCs and servers to network routers and switches, the torrid pace of technological advance means a constant stream of hardware into data centers and offices. Unfortunately, acquisition is just the beginning of the asset life cycle, and organizations often lack the same processes and rigor when eliminating

obsolete equipment as they exhibit when buying new. Given the well-recognized environmental hazards lurking in most electronics, the dumpster is no longer an acceptable disposal strategy, and while there are a variety of asset removal options for old hardware, successful execution means planning and effort from already over-worked IT staffs. Out of this need was born the reverse logistics, aka asset recovery, business—service providers that assume the task of decommissioning, reselling, and recycling old equipment.

While the term "reverse logistics" is sometimes used to describe electronic equipment disposal services, it's an imprecise usage because, according to the Reverse Logistics Association, its vendors are more generally involved in the gamut of processes involved in transporting previously purchased products from customers back to the manufacturer, whether for repair, customer service, or returns processing. The more common industry term is "asset recovery service." A typical example is Dell's (www.dell.com), which is described as providing "the logistic and disposal capabilities to recover and dispose of owned and/or leased computer equipment in a secure and environmentally safe way."

Asset Recovery Services & Process

Breaking down Dell's summarization, most asset recovery services incorporate several key steps: asset auditing, hardware deinstallation and removal, data protection, asset resale, reuse or remarketing, and recycling. A complete inventory and audit of decommissioned hardware is an important first step to many customers at DMD Systems Recovery (www.Processor.com /DMD) according to Operations Manager Cliffie McKay. Asset recovery vendors offer a variety of options when decommissioning equipment. According to McKay, some customers leave everything in place and let DMD do all the disassembly, while others pack equipment themselves on pallets ready for shipment. Of course, as with moving van lines, the convenience of having someone else do the packing comes at a price, with DMD charging by the hour for any deinstallation work.

Once packed, hardware is shipped to a vendor's facility for processing; the first, and perhaps most important, step of which is data sanitization and destruction. Ever since some highly visible and embarrassing cases of lost or stolen disks creating security headaches for everyone from the U.S. Department of Veterans Affairs to Fidelity Investments, every IT manager is keenly aware of the need to purge hard drives prior to reuse. Asset recovery services use a number of techniques for data protection ranging from overwriting or degaussing (for reusable devices) to mechanical or chemical destruction.

Systems passing diagnostic tests are either resold or donated to charity, with vendors using a variety of methods to value used equipment. For commodity items that tend to resell rapidly and in quantity, such as generic Pentium 4 desktops, many services keep regularly updated internal pricing sheets, while others may use a third-party data aggregator such as the Orion Blue Book (orionbluebook.com), a service that amalgamates pricing data from nationwide dealer surveys. According to McKay, nonstandard equipment is usually valued as a percentage of the wholesale price from an equipment broker.

Extremely old equipment that is effectively obsolete has no significant monetary value; however, it's often still useful to charities or nonprofits. Asset recovery brokers can act as a liaison to these organizations, ensuring that they get clean, tested, functional equipment.

Nonfunctional hardware is marked for reuse and recycling—similar terms with a subtle distinction. Some systems may fail a comprehensive test but still have functional components. These are cannibalized and the components—video board, hard drive, NIC, etc.—reused as spare parts. Equipment that's degenerated to doorstop status is marked for recycling where individual components—plastics, circuit boards, glass, batteries, etc.—are sorted and sent to recyclers.

What About Tape?

Most asset recovery services only deal in hardware and aren't equipped to handle removable media; however, there are options for recouping something from your tape library after upgrading to a new technology. Companies such as RecycleYourMedia.com, Graham Magnetics (www.grahammagnetics.com), and StorageMedia.com all offer services to buy and safely reuse old tapes. According to Brian Musil at RecycleYourMedia.com, its customers-typically Fortune 1000 companies, banks, and law or healthcare firms with large archival requirements—have historically shredded old tapes after expiration of their retention periods, sending pounds of tape shards to the landfill. His company buys the old tape, certifiably purges the data using U.S. Department of Defense standards (either by degaussing or overwriting,

depending on the type), and resells the used tape for a fraction of original list price.

Musil says the resale process is quite simple. For confidential data, the company ships out a lockable container to the customer's site and arranges for pickup by a bonded courier at the customer's convenience. The tapes are then erased and a certification report listing everything that was received and purged returned to the customer.

If you're in the market for used tape, Musil assuages any concerns about reliability. He notes that manufacturers typically guarantee tapes for 1 million passes, while most of what they buy is lucky to have reached a thousand. They also test and recertify all tapes prior to resale, ensuring many additional years of service.

APPLICATION NETWORKING

March 9, 2007

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 $\label{thm:continuous} \mbox{The EX Series secure WAN management appliance offers identity-based application visibility.}$

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tion, the AX Series' aRule Advanced Scripting technology provides ultimate policy creation flexibility to deliver rich traffic inspection and switching capabilities, helping organizations adapt to everchanging conditions and application types.

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Due to the product volume and life cycle, services focusing on PCs and servers compose the majority of the asset recovery business; however, others specialize in niches from networking and telecom equipment to used media. At Horizon Datacom Solutions (www.Processor.com/HorizonDatacom), President and CEO Vicky Nosbisch says the company's focus on networking equipment, particularly that from market leader Cisco (www.Processor.com/CiscoSystems), has allowed it to develop market knowledge and expertise that maximizes value returned to its customers. Unlike commodity PCs, datacomm hardware depreciates much more slowly, such that Horizon finds about 95% of the equipment it processes can be either resold or refurbished and donated. Given generally higher values, Nosbisch says that it is often more cost effective to repair equipment with minor flaws-say a couple nonfunctional ports on a switch-noting that it can "fix equipment for pennies on the dollar" compared with buying new.

Business Benefits

According to DMD's McKay, the primary value of its asset recovery service is convenience. He notes that "most companies don't have expertise in tearing equipment down" and often see asset disposal as a distraction to their IT staff—a sentiment echoed by Nosbisch who notes that most IT departments don't have the time and expertise to effectively deal in the resale marketplace.

Another benefit highlighted by service providers is data security, ensuring that drives or other nonvolatile storage are either thoroughly purged or destroyed. McKay points out that do-it-yourselfers dropping systems off to a local charity that lacks tech savvy have no assurance that the data is sanitized prior to resale. Some nefarious types, such as identity thieves, realize this and often use thrift

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shops as trolling grounds for sensitive personal data.

Given the churn in most companies' hardware inventories, you don't have to be a treehugger to appreciate the benefits of reuse and recycling—it makes financial sense both in recovery of undepreciated value and efficient use of precious IT staff. The actual financial return can vary widely depending upon the type, age, and condition of equipment, but the benefits in convenience and data security still make employing a professional asset recovery service a winning proposition.



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Control The Flow Of Enterprise Email

It Should Be A Prime Concern For Any Business

by John Brandon

In any corporate environment, managing the flow of email is similar to controlling highway traffic during rush hour. Buses and trucks are diverted; stoplights keep cars from entering the freeway and causing undue congestion; and highway troopers nab speeders and other ne'er-dowell drivers before they can wreak havoc on the roadways.

At many small and medium-sized enterprises, instead of controlling email with planned measures, an email server is often installed so employees can send and receive email at will, sometimes communicating freely with outsiders and with personal email accounts, attaching business documents and transmitting hundreds of noncompliant emails every day. In fact, according to Osterman Research, six out of seven companies do not have any method in place for mitigating the risks associated with email and instant messaging.

Yet, the risks are certainly there. In December, the Supreme Court instituted new amendments to the FRCP (Federal Rules of Civil Procedure), which now make it mandatory for companies to produce electronic information, including email, in civil litigation cases. The FRCP impact is profound across all business segments, especially in light of how email usage is becoming increasingly common in business. This is different from the effects of regulations such as HIPAA that affect only certain markets.

Email governance is the process of flagging noncompliant company emails,

Governance Drivers

Several key drivers are influencing why email governance is a critical issue for any business.

- Email volumes are increasing each year
- New regulations such as Federal Rules of Civil Procedure appear each year
- 99% of email traffic is not spam or a virus
- Helps legal counsel find electronic data quickly

organizing email into categories, and archiving messages for long-term retrieval. Governance helps companies stay compliant with complex regulations that govern electronic information storage and makes it easier for companies to deliver messages in the event of litigation against the company, a specific department activity, or a specific employee. Yet, newer systems are component-based or use a desktop agent to avoid the trap of re-archiving every email in a proprietary system.

Management Concerns?

In an interesting twist, the real concern over email traffic is not what you might expect based on CNN headlines and other news reports: Spam and viruses are only a minor factor when compared to the total number of messages transmitted each day. In fact, according to MessageGate, a com-

who is simply sending an accounting portfolio to his home email for the night to get more work done or someone who decides to send a business presentation with key corporate financials to a business customer who wants to invest in the company. In an unprotected, unmanaged environment, those emails will either be unaccounted for entirely or stored in an email archive that is difficult to search.

"The dog-ate-my-email excuse just does not work anymore," says Robert Pease, a MessageGate spokesperson. "In a company of any size, the counsel has to be able to produce and disclose the electronic information they have and report where it is stored."

Email Governance Tools

Email management systems help solve the governance issue by flagging emails before they are transmitted and then categorizing all emails as compliant or noncompliant. In many cases, a system such as MessageGate, Sendmail, or Orchestria

Governance helps companies stay compliant with complex regulations that govern electronic information storage and makes it easier for companies to deliver messages in the event of litigation against the company.

pany that provides a robust suite of email governance tools, about 99% of all transmitted email is not nefarious by nature—employees are generally not sending or receiving harmful viruses and spam messages, mostly thanks to good public awareness, spam and virus filters, and just the sheer number of legitimate emails that keeps the percentages low. Equally important, only a small percentage of spam messages actually do damage to corporate servers.

For example, one MessageGate client sends and receives about 6 million emails per day. Of those, the real culprits for noncompliance—the emails that could be used against the company in a litigation hearing—are not messages intended to harm corporate servers, infiltrate a customer's database, or infect local hard disks. The typical scenario is an employee

will analyze all incoming and outgoing email and scan for noncompliance problems, such as message attachments, email sent from the company counsel to an outside email, or text strings that reveal company financial information. In most cases, these systems flag the email and then send a confirmation message to the sender or recipient to gain approval for the email (a process that is also archived). This takes the tedium out of email governance, so there isn't an administrator that has to approve noncompliant email messages. Instead, email governance systems provide detailed reports that admins can use to analyze compliance in the company and follow up with individuals who are not following company processes. In most cases, these repeated transmissions are due to a misunderstanding about email compliance and not due to harmful intent.

Email Governance Tools

MessageGate

www.messagegate.com

- Component-based, does not interfere with throughput
- Sender Confirmation prompts user for compliance

Orchestria

www.orchestria.com

- Desktop agent flags incoming and outgoing messages
- Scans before send and after send for better compliance

Sendmail

www.sendmail.com

- Appliance-based email control
- · Works in open-source environments

"We have found that the true criminals at a company do not use email or instant messaging," says Pease. "Instead, they are using harder-to-trace methods, such as copying a file to a USB key drive or even using a camera phone to snap a picture of a document." Pease explains that MessageGate can be configured to catch multiple forms of noncompliant email using a module called Sender Confirmation, which scans all incoming and outgoing email, categorizing messages as spam, viruses, internal-to-external, from certain departments, or one of several other flags.

Orchestria uses a desktop agent to scan and categorize noncompliant email. One strength of the system is its ability to verify compliance with the sender and then to do a second scan after the email leaves the company. Sendmail Sentrion—the commercially available appliance for email governance—is another tool for controlling email, although it is equally focused on compliance and threat mitigation. Most email governance systems, including MessageGate, support the Sendmail opensource SMTP server protocol.

For SMEs, compliance is just as much of an issue as it is in large enterprises. It's perhaps even more critical given the crippling effect that litigation can have on a smaller company. The only real difference between email governance in smaller companies and big business is the volume, which can run in the hundreds of thousands per month for a 200-person firm as opposed to the millions per day at a company such as HP or Gateway. Either way, email governance is a critical, but often overlooked, computing requirement.

SECURITY MARCH 30, 2007

Steelcape Secures & Accelerates Data

New Solution Effectively Sends Data Without Opening Ports In The Firewall

COMPANIES SPEND BILLIONS to deter hackers. Current security offerings rely on encryption, but Steelcape believes in a more powerful approach that rejects the notion that ports must be opened and stay open. The Steelcape solution allows transactions to be completed without creating a hole in a user's firewall, and without the need for ongoing involvement of a central server.

Steelcape has developed an alternative TCP/IP communication method. This results in secure data being able to traverse the firewall unhindered. Steelcape alters IP

packets, enabling them to pass through firewalls unchallenged and unmodified. Steelcape's blend of patented computing algorithms and packet manipulation can be used to replace elements of the existing TCP/IP protocol stack or supplement the existing TCP/IP protocol stack. It is an ideal VPN or VLAN alternative and is compatible with TCP/IP version 4 and 6.

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- Bypassing of the transport layer, resulting in a decentralized enterprise architecture.

The Steelcape solution can be deployed from either a hardware appliance or software-based agent. Typical implementations are to deploy a point-to-point implementation that takes minutes to show results. The Steelcape Enterprise Manager provides reporting and managing of the digital signatures and encryption rules.

Steelcape Solution

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WHAT'S HAPPENING

Service At Its Finest

Pegasus Makes Its Customers No. 1

by Robyn Weisman

FORNEY, TEXAS,-BASED Pegasus Computer Marketing (www.Processor.com/Pegasus-Co) started in 1987 as a company specializing in mainframe computer sales. Cofounders Jim Lewis and Bill Simpson were approached by a mutual friend in the brokerage business who urged the two of them to start a business, and so Lewis, a software manager, and Simpson, a data center manager, took early retirement plans from their employers and started the company.

When asked how the company came to be named Pegasus, co-founder Simpson chuckles and says that he and his wife were at a movie one night, and at the start of the movie, the TriStar Pictures logo, a white Pegasus, flew across the screen. "It was beautiful, and that's how we came up with the name of Pegasus because at that time, it was rather unique. Now there's a lot of them," Simpson says, adding that he does not remember the movie he and his wife saw that fateful night.

Initially Simpson and Lewis worked under the umbrella of their brokerage friend, who provided the funding and the office space in which to work. "At that point in time, [Pegasus] was recorded as a partnership, just the two of us, and all we did was buy and sell mainframe equipment," says Simpson. Now, Pegasus is a privately held company.

Then the two men realized that with the ascendance of the PC, mainframe equipment was becoming a dinosaur, so they tried their hands at building PCs.

"That didn't last long because every mom and pop could build one in their kitchen cheaper than we could do, so we gave up on that and kept selling mainframes. It's still a market there. It's just not a big market, but we still sell mainframe on one side of the company. But on the other side we took up, was maintenance," Simpson explains.

Word Of Mouth, Great Customers

Pegasus services a plethora of items, including barcoding and POS (point of sale) equipment, switches, routers, client bridges, access points, wireless hubs, and printers, to name a few. Although the company specializes in repairing Symbol (www.Pro

cessor.com/SymbolTechnologies) and IBM (www.ibm.com) products, it has the expertise in servicing many other manufacturers. Its relationships with many suppliers means that not only can Pegasus provide quick turnaround, but it can also simply provide the needed parts for DIYers.

Simpson says that Pegasus' primary thrust in the maintenance business has always been service and a satisfied customer. "We tell each one of them when we're negotiating their contract [that] we want to be fair to us and be fair to them. We're not out to get rich. And that part of it has always worked—we don't get rich," Simpson says.

Pegasus only does depot maintenance work. No onsite maintenance is available. For Simpson's part, Pegasus' primary thrust in the near future will be in maintenance. "If we sell something, it'll be because we won the maintenance contract on it. Primarily, there's a good career for

According to Simpson, word of mouth got Pegasus most of its business. Now the company advertises in a few print venues, but the company's clientele includes a lot of "big boys," including department store icon Neiman-Marcus.

"That was our first great customer, and we've had them over eight years. They maintain a maintenance inventory here.

our people in maintenance, and we are going to stay with it," he says.

> European companies. Normally, Ortiz finds equipment after negotiating a price for a given equipment order to another broker. "Laurie can get on the Internet and locate equipment anywhere in the world. The Internet is a great thing for this purpose. She knows the equipment is out there. She normally won't bite off something she knows she can't chew, so

> Simpson. According to him, Ortiz has contacts all over the world, and she ships products all over the world with recent large orders going to Germany and Israel. Still acting as a "broker's broker" as it did when it only sold mainframes, Pegasus

> buys its products from companies world-

wide, frequently from Canadian and

she knows she has got it sold as soon as she finds it," Simpson says.

Sometimes, however, a deal will come Ortiz's way that looks good to keep in the company inventory, so she will buy it and then sell it

when it is the right time, Simpson notes. In addition, Pegasus has a provider that sells excess equipment to Pegasus, which Pegasus also resells, often as specials on its Web site.

Pegasus Computer Marketing, Inc.

When a [Neiman-Marcus] store has a register down, the maintenance engineer ships it to us, and we ship them a new one. Then we repair the bad one and put it back into their maintenance inventory," says Simpson.

Other Pegasus customers just ship their broken machinery to the company. For these customers, Pegasus makes repairs, typically with a three- to five-day turnaround. "Now that RFID is coming out of the woodwork, our people are training on that, and we'll move right into that world," Simpson says.

Other Countries, Other Sales

At the same time, Pegasus has branched out from its mainframe sales focus to sell POS hand scanners, cash registers, barcode printers, and other peripherals. According to Simpson, the company branched out in this direction eight or nine years ago.

Pegasus sales manager Laurie Ortiz took the lead in developing these markets, says

Technology Changes, **Pegasus Stays A Family**

"Technology changes almost on a daily basis, and our facilities have doubled in the last year. But when I say doubled, it's still small compared to a lot of companies. We are a little family-oriented group," Simp-

When people come to work for Pegasus, they don't leave, says Simpson. "Jim [Lewis] and I have been here 21 years. We've had another lady with us 20 years. My son's been here about 20 years. Laurie's been with us 18 years. We have our maintenance side, and we have our sales side. We started out with just two of us, and now there's 12 of us," Simpson says.

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